EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2383	ikk$	US-PGPUB; USPAT	ADJ	OFF	2008/01/22 09:20
L2	117787	yeast	US-PGPUB; USPAT	ADJ	OFF	2008/01/22 09:21
L3	26	1 near5 2	US-PGPUB; USPAT	ADJ	OFF	2008/01/22 09:21
L4	379	1 near5 complex	US-PGPUB; USPAT	ADJ	OFF	2008/01/22 09:36
L5	37	4 same 2	US-PGPUB; USPAT	ADJ	OFF	2008/01/22 09:36
L6	205	4 same express$	US-PGPUB; USPAT	ADJ	OFF	2008/01/22 10:14
L7	336	4 same activat$	US-PGPUB; USPAT	ADJ	OFF	2008/01/22 10:14
L8	218	4 near8 activat$	US-PGPUB; USPAT	ADJ	OFF	2008/01/22 10:15

```
* * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 11:59:24 ON 22 JAN 2008

=> fil .bec
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
       ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 11:59:48 ON 22 JAN 2008
ALL COPYRIGHTS AND RESTRICTIONS APPLY.  SEE HELP USAGETERMS FOR DETAILS.

11 FILES IN THE FILE LIST

=> s ikk?
FILE 'MEDLINE'
L1         3116 IKK?

FILE 'SCISEARCH'
L2         2633 IKK?

FILE 'LIFESCI'
L3          993 IKK?

FILE 'BIOTECHDS'
L4          109 IKK?

FILE 'BIOSIS'
L5         2462 IKK?

FILE 'EMBASE'
L6         1886 IKK?

FILE 'HCAPLUS'
L7         2597 IKK?

FILE 'NTIS'
L8           69 IKK?

FILE 'ESBIOBASE'
L9         1640 IKK?

FILE 'BIOTECHNO'
L10         490 IKK?

FILE 'WPIDS'
L11         279 IKK?

TOTAL FOR ALL FILES
L12       16274 IKK?

=> s l12(5a)complex?
FILE 'MEDLINE'
         712679 COMPLEX?
L13         445 L1 (5A)COMPLEX?

FILE 'SCISEARCH'
        1284180 COMPLEX?
L14         472 L2 (5A)COMPLEX?

FILE 'LIFESCI'
         233633 COMPLEX?
L15         276 L3 (5A)COMPLEX?
```

```
FILE 'BIOTECHDS'
        32542 COMPLEX?
L16         7 L4  (5A)COMPLEX?

FILE 'BIOSIS'
       726300 COMPLEX?
L17       486 L5  (5A)COMPLEX?

FILE 'EMBASE'
       627452 COMPLEX?
L18       412 L6  (5A)COMPLEX?

FILE 'HCAPLUS'
      1789332 COMPLEX?
L19       485 L7  (5A)COMPLEX?

FILE 'NTIS'
        85057 COMPLEX?
L20        10 L8  (5A)COMPLEX?

FILE 'ESBIOBASE'
       291286 COMPLEX?
L21       387 L9  (5A)COMPLEX?

FILE 'BIOTECHNO'
       170931 COMPLEX?
L22       171 L10(5A)COMPLEX?

FILE 'WPIDS'
       248039 COMPLEX?
L23        19 L11(5A)COMPLEX?

TOTAL FOR ALL FILES
L24      3170 L12(5A) COMPLEX?

=> s l24(15a)(express? or coexpress?)
FILE 'MEDLINE'
      1159171 EXPRESS?
        15512 COEXPRESS?
L25        26 L13(15A)(EXPRESS? OR COEXPRESS?)

FILE 'SCISEARCH'
      1482015 EXPRESS?
        15947 COEXPRESS?
L26        25 L14(15A)(EXPRESS? OR COEXPRESS?)

FILE 'LIFESCI'
       475906 EXPRESS?
         7507 COEXPRESS?
L27        28 L15(15A)(EXPRESS? OR COEXPRESS?)

FILE 'BIOTECHDS'
       164701 EXPRESS?
          818 COEXPRESS?
L28         2 L16(15A)(EXPRESS? OR COEXPRESS?)

FILE 'BIOSIS'
      1409296 EXPRESS?
        15735 COEXPRESS?
L29        29 L17(15A)(EXPRESS? OR COEXPRESS?)

FILE 'EMBASE'
      1066834 EXPRESS?
        14679 COEXPRESS?
L30        22 L18(15A)(EXPRESS? OR COEXPRESS?)
```

```
FILE 'HCAPLUS'
       1408902 EXPRESS?
         14817 COEXPRESS?
L31         26 L19(15A)(EXPRESS? OR COEXPRESS?)

FILE 'NTIS'
         41785 EXPRESS?
            39 COEXPRESS?
L32          3 L20(15A)(EXPRESS? OR COEXPRESS?)

FILE 'ESBIOBASE'
        681964 EXPRESS?
         11527 COEXPRESS?
L33         42 L21(15A)(EXPRESS? OR COEXPRESS?)

FILE 'BIOTECHNO'
        452182 EXPRESS?
          7587 COEXPRESS?
L34         17 L22(15A)(EXPRESS? OR COEXPRESS?)

FILE 'WPIDS'
        155738 EXPRESS?
           212 COEXPRESS?
L35          3 L23(15A)(EXPRESS? OR COEXPRESS?)

TOTAL FOR ALL FILES
L36        223 L24(15A)(EXPRESS? OR COEXPRESS?)

=> s l24(15a)(yeast or saccharomyces)
FILE 'MEDLINE'
         99971 YEAST
         84135 SACCHAROMYCES
L37          1 L13(15A)(YEAST OR SACCHAROMYCES)

FILE 'SCISEARCH'
        131926 YEAST
         85192 SACCHAROMYCES
L38          1 L14(15A)(YEAST OR SACCHAROMYCES)

FILE 'LIFESCI'
         70208 YEAST
         42153 SACCHAROMYCES
L39          0 L15(15A)(YEAST OR SACCHAROMYCES)

FILE 'BIOTECHDS'
         45631 YEAST
         15167 SACCHAROMYCES
L40          1 L16(15A)(YEAST OR SACCHAROMYCES)

FILE 'BIOSIS'
        157519 YEAST
         83697 SACCHAROMYCES
L41          1 L17(15A)(YEAST OR SACCHAROMYCES)

FILE 'EMBASE'
         88908 YEAST
         48270 SACCHAROMYCES
L42          1 L18(15A)(YEAST OR SACCHAROMYCES)

FILE 'HCAPLUS'
        212458 YEAST
         93026 SACCHAROMYCES
L43          4 L19(15A)(YEAST OR SACCHAROMYCES)
```

```
FILE 'NTIS'
          1468 YEAST
           486 SACCHAROMYCES
L44          0 L20(15A)(YEAST OR SACCHAROMYCES)

FILE 'ESBIOBASE'
         58317 YEAST
         27061 SACCHAROMYCES
L45          1 L21(15A)(YEAST OR SACCHAROMYCES)

FILE 'BIOTECHNO'
         50373 YEAST
         29288 SACCHAROMYCES
L46          1 L22(15A)(YEAST OR SACCHAROMYCES)

FILE 'WPIDS'
         38851 YEAST
          6503 SACCHAROMYCES
L47          1 L23(15A)(YEAST OR SACCHAROMYCES)

TOTAL FOR ALL FILES
L48         12 L24(15A)(YEAST OR SACCHAROMYCES)

=> s (136 or 148) not 2002-2008/py
FILE 'MEDLINE'
       3729737 2002-2008/PY
                 (20020000-20089999/PY)
L49          9 (L25 OR L37) NOT 2002-2008/PY

FILE 'SCISEARCH'
       6863021 2002-2008/PY
                 (20020000-20089999/PY)
L50          8 (L26 OR L38) NOT 2002-2008/PY

FILE 'LIFESCI'
        791718 2002-2008/PY
L51          9 (L27 OR L39) NOT 2002-2008/PY

FILE 'BIOTECHDS'
        157248 2002-2008/PY
L52          0 (L28 OR L40) NOT 2002-2008/PY

FILE 'BIOSIS'
       3370680 2002-2008/PY
L53         10 (L29 OR L41) NOT 2002-2008/PY

FILE 'EMBASE'
       3286962 2002-2008/PY
L54          8 (L30 OR L42) NOT 2002-2008/PY

FILE 'HCAPLUS'
       7234888 2002-2008/PY
L55         10 (L31 OR L43) NOT 2002-2008/PY

FILE 'NTIS'
         99791 2002-2008/PY
L56          1 (L32 OR L44) NOT 2002-2008/PY

FILE 'ESBIOBASE'
       1931750 2002-2008/PY
L57         12 (L33 OR L45) NOT 2002-2008/PY

FILE 'BIOTECHNO'
        244553 2002-2008/PY
L58         10 (L34 OR L46) NOT 2002-2008/PY
```

```
FILE 'WPIDS'
       5896744 2002-2008/PY
L59          0 (L35 OR L47) NOT 2002-2008/PY

TOTAL FOR ALL FILES
L60         77 (L36 OR L48) NOT 2002-2008/PY

=> s l24(15a)activat?
FILE 'MEDLINE'
        864732 ACTIVAT?
L61        258 L13(15A)ACTIVAT?

FILE 'SCISEARCH'
        989327 ACTIVAT?
L62        245 L14(15A)ACTIVAT?

FILE 'LIFESCI'
        283833 ACTIVAT?
L63        168 L15(15A)ACTIVAT?

FILE 'BIOTECHDS'
         33849 ACTIVAT?
L64          2 L16(15A)ACTIVAT?

FILE 'BIOSIS'
        898689 ACTIVAT?
L65        259 L17(15A)ACTIVAT?

FILE 'EMBASE'
        779739 ACTIVAT?
L66        232 L18(15A)ACTIVAT?

FILE 'HCAPLUS'
       1403184 ACTIVAT?
L67        270 L19(15A)ACTIVAT?

FILE 'NTIS'
         29872 ACTIVAT?
L68          2 L20(15A)ACTIVAT?

FILE 'ESBIOBASE'
        402269 ACTIVAT?
L69        229 L21(15A)ACTIVAT?

FILE 'BIOTECHNO'
        233622 ACTIVAT?
L70         98 L22(15A)ACTIVAT?

FILE 'WPIDS'
        309061 ACTIVAT?
L71          4 L23(15A)ACTIVAT?

TOTAL FOR ALL FILES
L72       1767 L24(15A) ACTIVAT?

=> s l72 not 2002-2008/py
FILE 'MEDLINE'
       3729737 2002-2008/PY
                 (20020000-20089999/PY)
L73         69 L61 NOT 2002-2008/PY

FILE 'SCISEARCH'
       6863021 2002-2008/PY
                 (20020000-20089999/PY)
```

```
L74          70 L62 NOT 2002-2008/PY

FILE 'LIFESCI'
        791718 2002-2008/PY
L75          54 L63 NOT 2002-2008/PY

FILE 'BIOTECHDS'
        157248 2002-2008/PY
L76           0 L64 NOT 2002-2008/PY

FILE 'BIOSIS'
       3370680 2002-2008/PY
L77          71 L65 NOT 2002-2008/PY

FILE 'EMBASE'
       3286962 2002-2008/PY
L78          65 L66 NOT 2002-2008/PY

FILE 'HCAPLUS'
       7234888 2002-2008/PY
L79          80 L67 NOT 2002-2008/PY

FILE 'NTIS'
         99791 2002-2008/PY
L80           0 L68 NOT 2002-2008/PY

FILE 'ESBIOBASE'
       1931750 2002-2008/PY
L81          70 L69 NOT 2002-2008/PY

FILE 'BIOTECHNO'
        244553 2002-2008/PY
L82          60 L70 NOT 2002-2008/PY

FILE 'WPIDS'
       5896744 2002-2008/PY
L83           1 L71 NOT 2002-2008/PY

TOTAL FOR ALL FILES
L84         540 L72 NOT 2002-2008/PY

=> dup rem l84
PROCESSING COMPLETED FOR L84
L85          104 DUP REM L84 (436 DUPLICATES REMOVED)

=> d tot

L85     ANSWER 1 OF 104  Elsevier BIOBASE  COPYRIGHT 2008 Elsevier Science B.V.
        on STN
AN      2007312024   ESBIOBASE
TI      Glutathione depletion down-regulates tumor necrosis factor
        α-induced NF-κB activity via IκB kinase-dependent and
        -independent mechanisms
AU      Lou H.; Kaplowitz N.
CS      N. Kaplowitz, Keck School of Medicine, University of Southern California,
        HMR101, 2011 Zonal Ave., Los Angeles, CA 90033, United States.
        E-mail: kaplowit@usc.edu
SO      Journal of Biological Chemistry, (05 OCT 2007), 282/40 (29470-29481), 42
        reference(s)
        CODEN: JBCHA3  ISSN: 0021-9258  E-ISSN: 1083-351X
DT      Journal; Article
CY      United States
LA      English
SL      English
```

L85 ANSWER 2 OF 104 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V. on STN
AN 2007311536 ESBIOBASE
TI Activation of a subset of genes by IFN-γ requires IKKβ but not interferon-dependent activation of NF-κB
AU Shultz D.B.; Fuller J.D.; Yang Y.; Sizemore N.; Rani M.R.S.; Stark G.R.
CS Dr. G.R. Stark, Department of Molecular Genetics, Cleveland Clinic, 9500 Euclid Avenue, Cleveland, OH 44195, United States.
E-mail: starkg@ccf.org
SO Journal of Interferon and Cytokine Research, (2007), 27/10 (875-883), 24 reference(s)
CODEN: JICRFJ ISSN: 1079-9907
DT Journal; Article
CY United States
LA English
SL English

L85 ANSWER 3 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI NF-κB-activating kinase NAK is an IκB kinase-activating kinase
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
IN Nakanishi, Makoto; Nakayama, Keiichi
AN 2001:767272 HCAPLUS
DN 135:328745

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001292779	A	20011023	JP 2000-110481	20000412

L85 ANSWER 4 OF 104 MEDLINE on STN DUPLICATE 1
TI Complete reconstitution of human IkappaB kinase (IKK) complex in yeast. Assessment of its stoichiometry and the role of IKKgamma on the complex activity in the absence of stimulation.
SO The Journal of biological chemistry, (2001 Sep 28) Vol. 276, No. 39, pp. 36320-6. Electronic Publication: 2001-07-24.
Journal code: 2985121R. ISSN: 0021-9258.
AU Miller B S; Zandi E
AN 2001522209 MEDLINE

L85 ANSWER 5 OF 104 MEDLINE on STN DUPLICATE 2
TI Calmodulin-dependent kinase II mediates T cell receptor/CD3- and phorbol ester-induced activation of IkappaB kinase.
SO The Journal of biological chemistry, (2001 Sep 21) Vol. 276, No. 38, pp. 36008-13. Electronic Publication: 2001-07-24.
Journal code: 2985121R. ISSN: 0021-9258.
AU Hughes K; Edin S; Antonsson A; Grundstrom T
AN 2001512053 MEDLINE

L85 ANSWER 6 OF 104 MEDLINE on STN DUPLICATE 3
TI Cytokine-induced activation of nuclear factor-kappa B is inhibited by hydrogen peroxide through oxidative inactivation of IkappaB kinase.
SO The Journal of biological chemistry, (2001 Sep 21) Vol. 276, No. 38, pp. 35693-700. Electronic Publication: 2001-07-30.
Journal code: 2985121R. ISSN: 0021-9258.
AU Korn S H; Wouters E F; Vos N; Janssen-Heininger Y M
AN 2001512027 MEDLINE

L85 ANSWER 7 OF 104 MEDLINE on STN DUPLICATE 4
TI Identification of a novel A20-binding inhibitor of nuclear factor-kappa B activation termed ABIN-2.
SO The Journal of biological chemistry, (2001 Aug 10) Vol. 276, No. 32, pp. 30216-23. Electronic Publication: 2001-06-04.
Journal code: 2985121R. ISSN: 0021-9258.
AU Van Huffel S; Delaei F; Heyninck K; De Valck D; Beyaert R
AN 2001441674 MEDLINE

L85 ANSWER 8 OF 104 MEDLINE on STN DUPLICATE 5
TI The PTEN tumor suppressor protein inhibits tumor necrosis factor-induced nuclear factor kappa B activity.
SO The Journal of biological chemistry, (2001 Jul 20) Vol. 276, No. 29, pp. 27740-4. Electronic Publication: 2001-05-16.
Journal code: 2985121R. ISSN: 0021-9258.
AU Gustin J A; Maehama T; Dixon J E; Donner D B
AN 2001403609 MEDLINE

L85 ANSWER 9 OF 104 MEDLINE on STN DUPLICATE 6
TI Bcl10 and MALT1, independent targets of chromosomal translocation in malt lymphoma, cooperate in a novel NF-kappa B signaling pathway.
SO The Journal of biological chemistry, (2001 Jun 1) Vol. 276, No. 22, pp. 19012-9. Electronic Publication: 2001-03-21.
Journal code: 2985121R. ISSN: 0021-9258.
AU Lucas P C; Yonezumi M; Inohara N; McAllister-Lucas L M; Abazeed M E; Chen F F; Yamaoka S; Seto M; Nunez G
AN 2001328391 MEDLINE

L85 ANSWER 10 OF 104 MEDLINE on STN DUPLICATE 7
TI Novel NEMO/IkappaB kinase and NF-kappa B target genes at the pre-B to immature B cell transition.
SO The Journal of biological chemistry, (2001 May 25) Vol. 276, No. 21, pp. 18579-90. Electronic Publication: 2001-02-21.
Journal code: 2985121R. ISSN: 0021-9258.
AU Li J; Peet G W; Balzarano D; Li X; Massa P; Barton R W; Marcu K B
AN 2001316128 MEDLINE

L85 ANSWER 11 OF 104 MEDLINE on STN DUPLICATE 8
TI Inhibition of the nuclear factor kappa B (NF-kappa B) pathway by tetracyclic kaurene diterpenes in macrophages. Specific effects on NF-kappa B-inducing kinase activity and on the coordinate activation of ERK and p38 MAPK.
SO The Journal of biological chemistry, (2001 May 11) Vol. 276, No. 19, pp. 15854-60. Electronic Publication: 2001-02-09.
Journal code: 2985121R. ISSN: 0021-9258.
AU Castrillo A; de Las Heras B; Hortelano S; Rodriguez B; Villar A; Bosca L
AN 2001291007 MEDLINE

L85 ANSWER 12 OF 104 MEDLINE on STN DUPLICATE 9
TI Effects of the NIK aly mutation on NF-kappaB activation by the Epstein-Barr virus latent infection membrane protein, lymphotoxin beta receptor, and CD40.
SO The Journal of biological chemistry, (2001 May 4) Vol. 276, No. 18, pp. 14602-6. Electronic Publication: 2001-03-14.
Journal code: 2985121R. ISSN: 0021-9258.
AU Luftig M A; Cahir-McFarland E; Mosialos G; Kieff E
AN 2001370772 MEDLINE

L85 ANSWER 13 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Tumor suppressor MMAC/PTEN inhibits cytokine-induced NFκB activation without interfering with the IκB degradation pathway
SO Journal of Biological Chemistry (2001), 276(14), 11402-11408
CODEN: JBCHA3; ISSN: 0021-9258
AU Koul, Dimpy; Yao, Yixin; Abbruzzese, James L.; Yung, W. K. Alfred; Reddy, Shrikanth A. G.
AN 2001:395052 HCAPLUS
DN 135:150793

L85 ANSWER 14 OF 104 MEDLINE on STN DUPLICATE 10
TI Activation of NF-kappa B by nontypeable Hemophilus influenzae is mediated by toll-like receptor 2-TAK1-dependent NIK-IKK alpha /beta-I kappa B alpha and MKK3/6-p38 MAP kinase signaling pathways in epithelial cells.
SO Proceedings of the National Academy of Sciences of the United States of America, (2001 Jul 17) Vol. 98, No. 15, pp. 8774-9. Electronic

Publication: 2001-07-03.
Journal code: 7505876. ISSN: 0027-8424.
AU Shuto T; Xu H; Wang B; Han J; Kai H; Gu X X; Murphy T F; Lim D J; Li J D
AN 2001419650 MEDLINE

L85 ANSWER 15 OF 104 MEDLINE on STN DUPLICATE 11
TI Activation of nuclear factor kappaB through the IKK complex by the topoisomerase poisons SN38 and doxorubicin: a brake to apoptosis in HeLa human carcinoma cells.
SO Cancer research, (2001 Nov 1) Vol. 61, No. 21, pp. 7785-91.
Journal code: 2984705R. ISSN: 0008-5472.
AU Bottero V; Busuttil V; Loubat A; Magne N; Fischel J L; Milano G; Peyron J F
AN 2001648412 MEDLINE

L85 ANSWER 16 OF 104 MEDLINE on STN DUPLICATE 12
TI Role of IKKgamma/nemo in assembly of the Ikappa B kinase complex.
SO The Journal of biological chemistry, (2001 Feb 9) Vol. 276, No. 6, pp. 4494-500. Electronic Publication: 2000-11-15.
Journal code: 2985121R. ISSN: 0021-9258.
AU Li X H; Fang X; Gaynor R B
AN 2001268720 MEDLINE

L85 ANSWER 17 OF 104 MEDLINE on STN DUPLICATE 13
TI vCLAP, a caspase-recruitment domain-containing protein of equine Herpesvirus-2, persistently activates the Ikappa B kinases through oligomerization of IKKgamma.
SO The Journal of biological chemistry, (2001 Feb 2) Vol. 276, No. 5, pp. 3183-7. Electronic Publication: 2000-12-11.
Journal code: 2985121R. ISSN: 0021-9258.
AU Poyet J L; Srinivasula S M; Alnemri E S
AN 2001269967 MEDLINE

L85 ANSWER 18 OF 104 MEDLINE on STN DUPLICATE 14
TI Activation of the I kappa B alpha kinase (IKK) complex by double-stranded RNA-binding defective and catalytic inactive mutants of the interferon-inducible protein kinase PKR.
SO Oncogene, (2001 Apr 5) Vol. 20, No. 15, pp. 1900-12.
Journal code: 8711562. ISSN: 0950-9232.
AU Ishii T; Kwon H; Hiscott J; Mosialos G; Koromilas A E
AN 2001237349 MEDLINE

L85 ANSWER 19 OF 104 MEDLINE on STN DUPLICATE 15
TI Mutations in the Drosophila dTAK1 gene reveal a conserved function for MAPKKKs in the control of rel/NF-kappaB-dependent innate immune responses.
SO Genes & development, (2001 Aug 1) Vol. 15, No. 15, pp. 1900-12.
Journal code: 8711660. ISSN: 0890-9369.
AU Vidal S; Khush R S; Leulier F; Tzou P; Nakamura M; Lemaitre B
AN 2001440010 MEDLINE

L85 ANSWER 20 OF 104 MEDLINE on STN DUPLICATE 16
TI Conjugated polyhydroxybenzene derivatives block tumor necrosis factor-alpha-mediated nuclear factor-kappaB activation and cyclooxygenase-2 gene transcription by targeting IkappaB kinase activity.
SO Molecular pharmacology, (2001 Dec) Vol. 60, No. 6, pp. 1439-48.
Journal code: 0035623. ISSN: 0026-895X.
AU Chen C C; Chiu K T; Chan S T; Chern J W
AN 2001677285 MEDLINE

L85 ANSWER 21 OF 104 MEDLINE on STN DUPLICATE 17
TI Induction of monocyte chemoattractant protein 1 by Helicobacter pylori involves NF-kappaB.
SO Infection and immunity, (2001 Mar) Vol. 69, No. 3, pp. 1280-6.
Journal code: 0246127. ISSN: 0019-9567.
AU Mori N; Ueda A; Geleziunas R; Wada A; Hirayama T; Yoshimura T; Yamamoto N

AN   2001285342   MEDLINE

L85   ANSWER 22 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
       STN
TI   NIK-associated protein (NAP), a negative regulator of TNF signaling.
SO   FASEB Journal, (March 8, 2001) Vol. 15, No. 5, pp. A1040. print.
       Meeting Info.: Annual Meeting of the Federation of American Societies for
       Experimental Biology on Experimental Biology 2001. Orlando, Florida, USA.
       March 31-April 04, 2001.
       CODEN: FAJOEC. ISSN: 0892-6638.
AU   Hu, Wen-Hui [Reprint author]; Walters, Winston [Reprint author]; White,
       Michael [Reprint author]; Dietrich, W. Dalton [Reprint author]; Bethea,
       John R. [Reprint author]
AN   2001:257979 BIOSIS

L85   ANSWER 23 OF 104   MEDLINE on STN   DUPLICATE 18
TI   Modulation of gene expression by (-)-epigallocatechin gallate in PC-9
       cells using a cDNA expression array.
SO   Biological & pharmaceutical bulletin, (2001 Aug) Vol. 24, No. 8, pp.
       883-6.
       Journal code: 9311984. ISSN: 0918-6158.
AU   Okabe S; Fujimoto N; Sueoka N; Suganuma M; Fujiki H
AN   2001466101   MEDLINE

L85   ANSWER 24 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
       STN
TI   CD40 signaling in B cells regulates the expression of pim-1 via the
       NF-kappaB pathway.
SO   FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A703. print.
       Meeting Info.: Annual Meeting of the Federation of American Societies for
       Experimental Biology on Experimental Biology 2001. Orlando, Florida, USA.
       March 31-April 04, 2001.
       CODEN: FAJOEC. ISSN: 0892-6638.
AU   Zhu, Mindy [Reprint author]; Ramirez, Luis; Lee, Rosaline [Reprint
       author]; Pelech, Steve; Bishop, Gail; Gold, Michael [Reprint author]
AN   2001:276736 BIOSIS

L85   ANSWER 25 OF 104   MEDLINE on STN   DUPLICATE 19
TI   Activation of NF-kappaB by hepatitis B virus X protein through an IkappaB
       kinase-independent mechanism.
SO   American journal of physiology. Gastrointestinal and liver physiology,
       (2001 Apr) Vol. 280, No. 4, pp. G669-77.
       Journal code: 100901227. ISSN: 0193-1857.
AU   Purcell N H; Yu C; He D; Xiang J; Paran N; DiDonato J A; Yamaoka S; Shaul
       Y; Lin A
AN   2001216984   MEDLINE

L85   ANSWER 26 OF 104 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V.
       on STN   DUPLICATE
AN   2001120976   ESBIOBASE
TI   Activation of NF-κB by hepatitis B virus X protein through an
       IκB kinase-independent mechanism
AU   Purcell N.H.; Yu C.; He D.; Xiang J.; Paran N.; DiDonato J.A.; Yamaoka
       S.; Shaul Y.; Lin A.
CS   A. Lin, Ben May Inst. for Cancer Research, University of Chicago, MC
       6027, 5841 S. Maryland, Chicago, IL 60637, United States.
       E-mail: alin@huggins.bsd.uchicago.edu
SO   American Journal of Physiology - Gastrointestinal and Liver Physiology,
       (2001), 280/4 43-4 (G669-G677), 74 reference(s)
       CODEN: APGPDF ISSN: 0193-1857
DT   Journal; Article
CY   United States
LA   English
SL   English

L85 ANSWER 27 OF 104 MEDLINE on STN DUPLICATE 21
TI S phase dependence and involvement of NF-kappaB activating kinase to NF-kappaB activation by camptothecin.
SO Biochemical pharmacology, (2001 Sep 1) Vol. 62, No. 5, pp. 603-16. Journal code: 0101032. ISSN: 0006-2952.
AU Habraken Y; Piret B; Piette J
AN 2001537538 MEDLINE

L85 ANSWER 28 OF 104 MEDLINE on STN DUPLICATE 22
TI The green tea polyphenol (-)-epigallocatechin-3-gallate blocks nuclear factor-kappa B activation by inhibiting I kappa B kinase activity in the intestinal epithelial cell line IEC-6.
SO Molecular pharmacology, (2001 Sep) Vol. 60, No. 3, pp. 528-33. Journal code: 0035623. ISSN: 0026-895X.
AU Yang F; Oz H S; Barve S; de Villiers W J; McClain C J; Varilek G W
AN 2001457157 MEDLINE

L85 ANSWER 29 OF 104 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 23
TI Activation of I kappa B kinase and its effect in the course of NF-kappa B activation
SO PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS, (AUG 2001) Vol. 28, No. 4, pp. 455-458.
ISSN: 1000-3282.
AU Wang Y (Reprint); Huang W H
AN 2001:730345 SCISEARCH

L85 ANSWER 30 OF 104 MEDLINE on STN DUPLICATE 24
TI GPx-1 gene delivery modulates NFkappaB activation following diverse environmental injuries through a specific subunit of the IKK complex.
SO Antioxidants & redox signaling, (2001 Jun) Vol. 3, No. 3, pp. 415-32. Journal code: 100888899. ISSN: 1523-0864.
AU Li Q; Sanlioglu S; Li S; Ritchie T; Oberley L; Engelhardt J F
AN 2001444800 MEDLINE

L85 ANSWER 31 OF 104 MEDLINE on STN DUPLICATE 25
TI 2-acetylaminofluorene up-regulates rat mdr1b expression through generating reactive oxygen species that activate NF-kappa B pathway.
SO The Journal of biological chemistry, (2001 Jan 5) Vol. 276, No. 1, pp. 413-20.
Journal code: 2985121R. ISSN: 0021-9258.
AU Deng L; Lin-Lee Y C; Claret F X; Kuo M T
AN 2001112672 MEDLINE

L85 ANSWER 32 OF 104 MEDLINE on STN DUPLICATE 26
TI The catalytic activity of dsRNA-dependent protein kinase, PKR, is required for NF-kappaB activation.
SO Oncogene, (2001 Jan 18) Vol. 20, No. 3, pp. 385-94. Journal code: 8711562. ISSN: 0950-9232.
AU Gil J; Rullas J; Garcia M A; Alcami J; Esteban M
AN 2001256801 MEDLINE

L85 ANSWER 33 OF 104 MEDLINE on STN DUPLICATE 27
TI TAK1 is a ubiquitin-dependent kinase of MKK and IKK.
SO Nature, (2001 Jul 19) Vol. 412, No. 6844, pp. 346-51. Journal code: 0410462. ISSN: 0028-0836.
AU Wang C; Deng L; Hong M; Akkaraju G R; Inoue J; Chen Z J
AN 2001411919 MEDLINE

L85 ANSWER 34 OF 104 MEDLINE on STN DUPLICATE 28
TI 5-Fluorouracil suppression of NF-KappaB is mediated by the inhibition of IKappab kinase activity in human salivary gland cancer cells.
SO Biochemical and biophysical research communications, (2001 Mar 23) Vol. 282, No. 1, pp. 292-6.

Journal code: 0372516. ISSN: 0006-291X.
AU Azuma M; Yamashita T; Aota K; Tamatani T; Sato M
AN 2001189722 MEDLINE

L85 ANSWER 35 OF 104 MEDLINE on STN DUPLICATE 29
TI Functional activities of the human T-cell leukemia virus type I Tax oncoprotein: cellular signaling through NF-kappa B.
SO Cytokine & growth factor reviews, (2001 Jun-Sep) Vol. 12, No. 2-3, pp. 207-17. Ref: 156
Journal code: 9612306. ISSN: 1359-6101.
AU Jeang K T
AN 2001473997 MEDLINE

L85 ANSWER 36 OF 104 MEDLINE on STN DUPLICATE 30
TI Characterization of aging-associated up-regulation of constitutive nuclear factor-kappa B binding activity.
SO Antioxidants & redox signaling, (2001 Feb) Vol. 3, No. 1, pp. 147-56.
Journal code: 100888899. ISSN: 1523-0864.
AU Helenius M; Kyrylenko S; Vehvilainen P; Salminen A
AN 2001459769 MEDLINE

L85 ANSWER 37 OF 104 MEDLINE on STN DUPLICATE 31
TI CSN3 interacts with IKKgamma and inhibits TNF- but not IL-1-induced NF-kappaB activation.
SO FEBS letters, (2001 Jun 15) Vol. 499, No. 1-2, pp. 133-6.
Journal code: 0155157. ISSN: 0014-5793.
AU Hong X; Xu L; Li X; Zhai Z; Shu H
AN 2001357636 MEDLINE

L85 ANSWER 38 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI The cytotoxic action of arsenite in vitro and in vivo is dependent on inhibition of NF-kappaB.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 101a. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology, Part 1. Orlando, Florida, USA. December 07-11, 2001. American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
AU Mathas, Stephan [Reprint author]; Lietz, Andreas [Reprint author]; Janz, Martin [Reprint author]; Jundt, Franziska [Reprint author]; Bommert, Kurt [Reprint author]; Doerken, Bernd [Reprint author]
AN 2002:129857 BIOSIS

L85 ANSWER 39 OF 104 MEDLINE on STN DUPLICATE 32
TI Roles of Akt/PKB and IKK complex in constitutive induction of NF-kappaB in hepatocellular carcinomas of transforming growth factor alpha/c-myc transgenic mice.
SO Hepatology (Baltimore, Md.), (2001 Jul) Vol. 34, No. 1, pp. 32-41.
Journal code: 8302946. ISSN: 0270-9139.
AU Factor V; Oliver A L; Panta G R; Thorgeirsson S S; Sonenshein G E; Arsura M
AN 2001374658 MEDLINE

L85 ANSWER 40 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI Activation of IkappaB kinase and NF-kappaB by proinflammatory cytokines.
SO FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A1. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology 2001. Orlando, Florida, USA. March 31-April 04, 2001.
CODEN: FAJOEC. ISSN: 0892-6638.
AU Delhase, Mireille [Reprint author]; Rothwarf, David M. [Reprint author]; Karin, Michael [Reprint author]
AN 2001:244948 BIOSIS

L85 ANSWER 41 OF 104 EMBASE
TI Activation of NF-κB by hepatitis B virus X protein through an IκB kinase-independent mechanism.
SO American Journal of Physiology - Gastrointestinal and Liver Physiology, (Apr 2001) Vol. 280, No. 4 43-4, pp. G669-G677.
Refs: 74
ISSN: 0193-1857 CODEN: APGPDF
AU Purcell N.H.; Yu C.; He D.; Xiang J.; Paran N.; Didonato J.A.; Yamaoka S.; Shaul Y.; Lin A.
AN 2001188601 EMBASE

L85 ANSWER 42 OF 104 MEDLINE on STN DUPLICATE 33
TI CARD9 is a novel caspase recruitment domain-containing protein that interacts with BCL10/CLAP and activates NF-kappa B.
SO The Journal of biological chemistry, (2000 Dec 29) Vol. 275, No. 52, pp. 41082-6.
Journal code: 2985121R. ISSN: 0021-9258.
AU Bertin J; Guo Y; Wang L; Srinivasula S M; Jacobson M D; Poyet J L; Merriam S; Du M Q; Dyer M J; Robison K E; DiStefano P S; Alnemri E S
AN 2001103290 MEDLINE

L85 ANSWER 43 OF 104 MEDLINE on STN DUPLICATE 34
TI Activation of the Ikappa B kinases by RIP via IKKgamma /NEMO-mediated oligomerization.
SO The Journal of biological chemistry, (2000 Dec 1) Vol. 275, No. 48, pp. 37966-77.
Journal code: 2985121R. ISSN: 0021-9258.
AU Poyet J L; Srinivasula S M; Lin J H; Fernandes-Alnemri T; Yamaoka S; Tsichlis P N; Alnemri E S
AN 2001078318 MEDLINE

L85 ANSWER 44 OF 104 MEDLINE on STN DUPLICATE 35
TI Inhibition of NF-kappa B activation by arsenite through reaction with a critical cysteine in the activation loop of Ikappa B kinase.
SO The Journal of biological chemistry, (2000 Nov 17) Vol. 275, No. 46, pp. 36062-6.
Journal code: 2985121R. ISSN: 0021-9258.
AU Kapahi P; Takahashi T; Natoli G; Adams S R; Chen Y; Tsien R Y; Karin M
AN 2001074348 MEDLINE

L85 ANSWER 45 OF 104 MEDLINE on STN DUPLICATE 36
TI The I kappa B kinase (IKK) complex is tripartite and contains IKK gamma but not IKAP as a regular component.
SO The Journal of biological chemistry, (2000 Sep 22) Vol. 275, No. 38, pp. 29779-87.
Journal code: 2985121R. ISSN: 0021-9258.
AU Krappmann D; Hatada E N; Tegethoff S; Li J; Klippel A; Giese K; Baeuerle P A; Scheidereit C
AN 2001021396 MEDLINE

L85 ANSWER 46 OF 104 MEDLINE on STN DUPLICATE 37
TI An induced proximity model for NF-kappa B activation in the Nod1/RICK and RIP signaling pathways.
SO The Journal of biological chemistry, (2000 Sep 8) Vol. 275, No. 36, pp. 27823-31.
Journal code: 2985121R. ISSN: 0021-9258.
AU Inohara N; Koseki T; Lin J; del Peso L; Lucas P C; Chen F F; Ogura Y; Nunez G
AN 2000496005 MEDLINE

L85 ANSWER 47 OF 104 MEDLINE on STN DUPLICATE 38
TI Characterization of the recombinant IKK1/IKK2 heterodimer. Mechanisms regulating kinase activity.
SO The Journal of biological chemistry, (2000 Aug 25) Vol. 275, No. 34, pp.

25883-91.
Journal code: 2985121R. ISSN: 0021-9258.
AU Huynh Q K; Boddupalli H; Rouw S A; Koboldt C M; Hall T; Sommers C; Hauser S D; Pierce J L; Combs R G; Reitz B A; Diaz-Collier J A; Weinberg R A; Hood B L; Kilpatrick B F; Tripp C S
AN 2000458530 MEDLINE

L85 ANSWER 48 OF 104 MEDLINE on STN DUPLICATE 39
TI Inhibition of IkappaB kinase activity by sodium salicylate in vitro does not reflect its inhibitory mechanism in intact cells.
SO The Journal of biological chemistry, (2000 Apr 14) Vol. 275, No. 15, pp. 10925-9.
Journal code: 2985121R. ISSN: 0021-9258.
AU Alpert D; Vilcek J
AN 2000219131 MEDLINE

L85 ANSWER 49 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI CIKS, a connection to IκB kinase and stress-activated protein kinase
SO Proceedings of the National Academy of Sciences of the United States of America (2000), 97(19), 10494-10499
CODEN: PNASA6; ISSN: 0027-8424
AU Leonardi, Antonio; Chariot, Alain; Claudio, Estefania; Cunningham, Kirk; Siebenlist, Ulrich
AN 2000:664841 HCAPLUS
DN 134:142668

L85 ANSWER 50 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Regulation of the NF-κB activation pathway by isolated domains of FIP3/IKKγ, a component of the IκB-α kinase complex
SO Journal of Biological Chemistry (2000), 275(13), 9882-9889
CODEN: JBCHA3; ISSN: 0021-9258
AU Ye, Jianjiang; Xie, Xueping; Tarassishin, Leonid; Horwitz, Marshall S.
AN 2000:234942 HCAPLUS
DN 133:42023

L85 ANSWER 51 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI NF-κB signaling promotes both cell survival and neurite process formation in nerve growth factor-stimulated PC12 cells
SO Journal of Neuroscience (2000), 20(20), 7556-7563
CODEN: JNRSDS; ISSN: 0270-6474
AU Foehr, Erik D.; Lin, Xin; O'Mahony, Alison; Geleziunas, Romas; Bradshaw, Ralph A.; Greene, Warner C.
AN 2000:763118 HCAPLUS
DN 133:345139

L85 ANSWER 52 OF 104 MEDLINE on STN DUPLICATE 40
TI The physical association of protein kinase C theta with a lipid raft-associated inhibitor of kappa B factor kinase (IKK) complex plays a role in the activation of the NF-kappa B cascade by TCR and CD28.
SO Journal of immunology (Baltimore, Md. : 1950), (2000 Dec 15) Vol. 165, No. 12, pp. 6933-40.
Journal code: 2985117R. ISSN: 0022-1767.
AU Khoshnan A; Bae D; Tindell C A; Nel A E
AN 2001091134 MEDLINE

L85 ANSWER 53 OF 104 MEDLINE on STN DUPLICATE 41
TI Raf induces NF-kappaB by membrane shuttle kinase MEKK1, a signaling pathway critical for transformation.
SO Proceedings of the National Academy of Sciences of the United States of America, (2000 Apr 25) Vol. 97, No. 9, pp. 4615-20.
Journal code: 7505876. ISSN: 0027-8424.
AU Baumann B; Weber C K; Troppmair J; Whiteside S; Israel A; Rapp U R; Wirth T
AN 2000243744 MEDLINE

L85 ANSWER 54 OF 104 MEDLINE on STN DUPLICATE 42
TI PKR stimulates NF-kappaB irrespective of its kinase function by interacting with the IkappaB kinase complex.
SO Molecular and cellular biology, (2000 Jul) Vol. 20, No. 13, pp. 4532-42. Journal code: 8109087. ISSN: 0270-7306.
AU Bonnet M C; Weil R; Dam E; Hovanessian A G; Meurs E F
AN 2000307858 MEDLINE

L85 ANSWER 55 OF 104 MEDLINE on STN DUPLICATE 43
TI Mapping of atypical protein kinase C within the nerve growth factor signaling cascade: relationship to differentiation and survival of PC12 cells.
SO Molecular and cellular biology, (2000 Jul) Vol. 20, No. 13, pp. 4494-504. Journal code: 8109087. ISSN: 0270-7306.
AU Wooten M W; Seibenhener M L; Neidigh K B; Vandenplas M L
AN 2000307854 MEDLINE

L85 ANSWER 56 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Mixed-lineage kinase 3 delivers CD3/CD28-derived signals into the IκB kinase complex
SO Molecular and Cellular Biology (2000), 20(7), 2556-2568 CODEN: MCEBD4; ISSN: 0270-7306
AU Hehner, Steffen P.; Hofmann, Thomas G.; Ushmorov, Alexej; Dienz, Oliver; Leung, Irene Wing-Lan; Lassam, Norman; Scheidereit, Claus; Droge, Wulf; Schmitz, M. Lienhard
AN 2000:193394 HCAPLUS
DN 133:54457

L85 ANSWER 57 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 44
TI A dominant negative form of IKK2 prevents suppression of apoptosis by the peroxisome proliferator nafenopin
SO Carcinogenesis, (20000900) vol. 21, no. 9, pp. 1757-1760. ISSN: 0143-3334.
AU Cosulich, S.C.; James, N.H.; Needham, M.R.C.; Newham, P.P.; Bundell, K.R.; Roberts, R.A.
AN 2000:115994 LIFESCI

L85 ANSWER 58 OF 104 MEDLINE on STN DUPLICATE 45
TI A novel X-linked disorder of immune deficiency and hypohidrotic ectodermal dysplasia is allelic to incontinentia pigmenti and due to mutations in IKK-gamma (NEMO).
SO American journal of human genetics, (2000 Dec) Vol. 67, No. 6, pp. 1555-62. Electronic Publication: 2000-10-24. Journal code: 0370475. ISSN: 0002-9297.
AU Zonana J; Elder M E; Schneider L C; Orlow S J; Moss C; Golabi M; Shapira S K; Farndon P A; Wara D W; Emmal S A; Ferguson B M
AN 2001086127 MEDLINE

L85 ANSWER 59 OF 104 MEDLINE on STN DUPLICATE 46
TI Selective inhibition of NF-kappaB activation by a peptide that blocks the interaction of NEMO with the IkappaB kinase complex.
SO Science (New York, N.Y.), (2000 Sep 1) Vol. 289, No. 5484, pp. 1550-4. Journal code: 0404511. ISSN: 0036-8075.
AU May M J; D'Acquisto F; Madge L A; Glockner J; Pober J S; Ghosh S
AN 2000431571 MEDLINE

L85 ANSWER 60 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI IκB kinase (IKK) complex
SO Tanpakushitsu Kakusan Koso (2000), 45(9, 6gatsugozoka), 1546-1550 CODEN: TAKKAJ; ISSN: 0039-9450
AU Fujita, Takashi; Suhara, Wakako
AN 2000:375269 HCAPLUS
DN 133:1796

L85 ANSWER 61 OF 104 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 47
TI Somatic mutagenesis studies of NF-kappa B signaling in human T cells: evidence for an essential role of IKK gamma in NF-kappa B activation by T-cell costimulatory signals and HTLV-I Tax protein
SO ONCOGENE, (9 MAR 2000) Vol. 19, No. 11, pp. 1448-1456.
ISSN: 0950-9232.
AU Harhaj E W; Good L; Xiao G T; Uhlik M; Cvijic M E; Rivera-Walsh I; Sun S C (Reprint)
AN 2000:230136 SCISEARCH

L85 ANSWER 62 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 48
TI Activation of NF- Kappa B by the dsRNA-dependent protein kinase, PKR involves the I Kappa B kinase complex
SO Oncogene, (20000309) vol. 19, no. 11, pp. 1369-1378.
ISSN: 0950-9232.
AU Gil, J.; Alcami, J.; Esteban, M.*
AN 2000:68117 LIFESCI

L85 ANSWER 63 OF 104 MEDLINE on STN DUPLICATE 49
TI Activation of the heterodimeric IkappaB kinase alpha (IKKalpha)-IKKbeta complex is directional: IKKalpha regulates IKKbeta under both basal and stimulated conditions.
SO Molecular and cellular biology, (2000 Feb) Vol. 20, No. 4, pp. 1170-8.
Journal code: 8109087. ISSN: 0270-7306.
AU O'Mahony A; Lin X; Geleziunas R; Greene W C
AN 2000115862 MEDLINE

L85 ANSWER 64 OF 104 MEDLINE on STN DUPLICATE 50
TI NAK is an IkappaB kinase-activating kinase.
SO Nature, (2000 Apr 13) Vol. 404, No. 6779, pp. 778-82.
Journal code: 0410462. ISSN: 0028-0836.
AU Tojima Y; Fujimoto A; Delhase M; Chen Y; Hatakeyama S; Nakayama K; Kaneko Y; Nimura Y; Motoyama N; Ikeda K; Karin M; Nakanishi M
AN 2000244479 MEDLINE

L85 ANSWER 65 OF 104 MEDLINE on STN DUPLICATE 51
TI Protein kinase C-alpha is an upstream activator of the IkappaB kinase complex in the TPA signal transduction pathway to NF-kappaB in U2OS cells.
SO Cellular signalling, (2000 Dec) Vol. 12, No. 11-12, pp. 759-68.
Journal code: 8904683. ISSN: 0898-6568.
AU Vertegaal A C; Kuiperij H B; Yamaoka S; Courtois G; van der Eb A J; Zantema A
AN 2001108892 MEDLINE

L85 ANSWER 66 OF 104 MEDLINE on STN DUPLICATE 52
TI IKKepsilon is part of a novel PMA-inducible IkappaB kinase complex.
SO Molecular cell, (2000 Mar) Vol. 5, No. 3, pp. 513-22.
Journal code: 9802571. ISSN: 1097-2765.
AU Peters R T; Liao S M; Maniatis T
AN 2000337984 MEDLINE

L85 ANSWER 67 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN
TI Kinase regulation in inflammatory response (Reply)
SO Nature, (20000727) vol. 406, no. 6794, p. 368.
ISSN: 0028-0836.
AU Ozes, O.N.; Mayo, L.D.; Gustin, J.A.; Pfeffer, S.R.; Pfeffer, L.M.; Donner, D.B.
AN 2000:90645 LIFESCI

L85 ANSWER 68 OF 104 MEDLINE on STN DUPLICATE 53
TI Activation of the IkappaB kinase complex by TRAF6 requires a dimeric ubiquitin-conjugating enzyme complex and a unique polyubiquitin chain.
SO Cell, (2000 Oct 13) Vol. 103, No. 2, pp. 351-61.

Journal code: 0413066. ISSN: 0092-8674.
AU Deng L; Wang C; Spencer E; Yang L; Braun A; You J; Slaughter C; Pickart C; Chen Z J
AN 2000506244 MEDLINE

L85 ANSWER 69 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN
TI Role of Drosophila IKK gamma in a toll-independent antibacterial immune response
SO Nature Immunology [Nat. Immunol.], (20001000) vol. 1, no. 4, pp. 342-347. ISSN: 1529-2908.
AU Rutschmann, S.; Jung, A.C.; Zhou, R.; Silverman, N.; Hoffmann, J.A.; Ferrandon, D.
AN 2001:6544 LIFESCI

L85 ANSWER 70 OF 104 MEDLINE on STN DUPLICATE 54
TI The IKK complex: an integrator of all signals that activate NF-kappaB?.
SO Trends in cell biology, (2000 Apr) Vol. 10, No. 4, pp. 129-33. Ref: 44
Journal code: 9200566. ISSN: 0962-8924.
AU Israel A
AN 2000207155 MEDLINE

L85 ANSWER 71 OF 104 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI PKC epsilon enhances NF-Kappa B activation via modulation of the IKK complex in cardiac myocytes
SO CIRCULATION, (31 OCT 2000) Vol. 102, No. 18, Supp. [S], pp. 120-120. MA 576.
ISSN: 0009-7322.
AU Li R C X (Reprint); Zhang J; Zheng Y T; Wead W B; Gao J M; Cao X N; Bolli R; Ping P P
AN 2001:53776 SCISEARCH

L85 ANSWER 72 OF 104 MEDLINE on STN DUPLICATE 55
TI Anti-inflammatory cyclopentenone prostaglandins are direct inhibitors of IkappaB kinase.
SO Nature, (2000 Jan 6) Vol. 403, No. 6765, pp. 103-8.
Journal code: 0410462. ISSN: 0028-0836.
AU Rossi A; Kapahi P; Natoli G; Takahashi T; Chen Y; Karin M; Santoro M G
AN 2000102300 MEDLINE

L85 ANSWER 73 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN
TI The I Kappa B kinase (IKK) and NF- Kappa B: key elements of proinflammatory signalling
SO Seminars in Immunology [Semin. Immunol.], (20000200) vol. 12, no. 1, pp. 85-98.
ISSN: 1044-5323.
AU Karin, M.; Delhase, M.
AN 2000:64270 LIFESCI

L85 ANSWER 74 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI NF-kappaB and the innate immune response.
SO Current Opinion in Immunology, (Feb., 2000) Vol. 12, No. 1, pp. 52-58. print.
CODEN: COPIEL. ISSN: 0952-7915.
AU Hatada, Eunice N.; Krappmann, Daniel; Scheidereit, Claus [Reprint author]
AN 2000:137610 BIOSIS

L85 ANSWER 75 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI PKC epsilon enhances NF-kappa B activation via modulation of the IKK complex in cardiac myocytes.
SO Circulation, (October 31, 2000) Vol. 102, No. 18 Supplement, pp. II.120. print.

Meeting Info.: Abstracts from American Heart Association Scientific Sessions 2000. New Orleans, Louisiana, USA. November 12-15, 2000. American Heart Association.
CODEN: CIRCAZ. ISSN: 0009-7322.
AU Li, Richard C. X. [Reprint author]; Zhang, Jun [Reprint author]; Zheng, Yu-Ting [Reprint author]; Wead, William B. [Reprint author]; Gao, Jiuming [Reprint author]; Cao, Xinan [Reprint author]; Bolli, Roberto [Reprint author]; Ping, Peipei [Reprint author]
AN 2001:112217 BIOSIS

L85 ANSWER 76 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 56
TI NF-κB activation inhibitors, methods for screening the inhibitors using the function of TGF-β activated kinase 1 as parameter, and therapeutical use of the inhibitors for autoimmune diseases and inflammation
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
IN Sugita, Takahisa; Sakurai, Hiroaki; Kageyama, Noriko; Hasegawa, Ko
AN 1999:511259 HCAPLUS
DN 131:141477

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9940202	A1	19990812	WO 1999-JP422	19990202

W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	AU 9920764	A	19990823	AU 1999-20764	19990202
	JP 2000197500	A	20000718	JP 1999-26803	19990204

L85 ANSWER 77 OF 104 MEDLINE on STN DUPLICATE 57
TI Aminosalicylic acid inhibits IkappaB kinase alpha phosphorylation of IkappaBalpha in mouse intestinal epithelial cells.
SO The Journal of biological chemistry, (1999 Dec 17) Vol. 274, No. 51, pp. 36631-6.
Journal code: 2985121R. ISSN: 0021-9258.
AU Yan F; Polk D B
AN 2000062888 MEDLINE

L85 ANSWER 78 OF 104 MEDLINE on STN DUPLICATE 58
TI Protein kinase C and calcineurin synergize to activate IkappaB kinase and NF-kappaB in T lymphocytes.
SO The Journal of biological chemistry, (1999 Aug 13) Vol. 274, No. 33, pp. 22923-31.
Journal code: 2985121R. ISSN: 0021-9258.
AU Trushin S A; Pennington K N; Algeciras-Schimnich A; Paya C V
AN 1999367411 MEDLINE

L85 ANSWER 79 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 59
TI Role of Adapter Function in Oncoprotein-mediated Activation of NF- Kappa B: Human T-cell leukemia virus type I Tax interacts directly with I Kappa B kinase gamma
SO Journal of Biological Chemistry [J. Biol. Chem.], (19990618) vol. 274, no. 25, pp. 17402-17405.
ISSN: 0021-9258.
AU Jin, D.; Giordano, V.; Kibler, K.V.; Nakano, H.; Jeang, K.
AN 1999:80820 LIFESCI

L85 ANSWER 80 OF 104 MEDLINE on STN DUPLICATE 60
TI Nuclear IkappaBbeta maintains persistent NF-kappaB activation in HIV-1-infected myeloid cells.
SO The Journal of biological chemistry, (1999 May 7) Vol. 274, No. 19, pp.

13010-6.
Journal code: 2985121R. ISSN: 0021-9258.
AU DeLuca C; Petropoulos L; Zmeureanu D; Hiscott J
AN 1999240678 MEDLINE

L85 ANSWER 81 OF 104 MEDLINE on STN DUPLICATE 61
TI How NF-kappaB is activated: the role of the IkappaB kinase (
IKK) complex.
SO Oncogene, (1999 Nov 22) Vol. 18, No. 49, pp. 6867-74. Ref: 72
Journal code: 8711562. ISSN: 0950-9232.
AU Karin M
AN 2000070127 MEDLINE

L85 ANSWER 82 OF 104 MEDLINE on STN DUPLICATE 62
TI NF-kappaB activation by a signaling complex containing TRAF2, TANK and
TBK1, a novel IKK-related kinase.
SO The EMBO journal, (1999 Dec 1) Vol. 18, No. 23, pp. 6694-704.
Journal code: 8208664. ISSN: 0261-4189.
AU Pomerantz J L; Baltimore D
AN 2000050564 MEDLINE

L85 ANSWER 83 OF 104 MEDLINE on STN DUPLICATE 63
TI Inhibition of cyclo-oxygenase 2 expression in colon cells by the
chemopreventive agent curcumin involves inhibition of NF-kappaB
activation via the NIK/IKK signalling complex.
SO Oncogene, (1999 Oct 28) Vol. 18, No. 44, pp. 6013-20.
Journal code: 8711562. ISSN: 0950-9232.
AU Plummer S M; Holloway K A; Manson M M; Munks R J; Kaptein A; Farrow S;
Howells L
AN 2000027389 MEDLINE

L85 ANSWER 84 OF 104 MEDLINE on STN DUPLICATE 64
TI Primary human CD4+ T cells contain heterogeneous I kappa B kinase
complexes: role in activation of the IL-2 promoter.
SO Journal of immunology (Baltimore, Md. : 1950), (1999 Nov 15) Vol. 163, No.
10, pp. 5444-52.
Journal code: 2985117R. ISSN: 0022-1767.
AU Khoshnan A; Kempiak S J; Bennett B L; Bae D; Xu W; Manning A M; June C H;
Nel A E
AN 2000021841 MEDLINE

L85 ANSWER 85 OF 104 MEDLINE on STN DUPLICATE 65
TI NF-kappaB p105 is a target of IkappaB kinases and controls signal
induction of Bcl-3-p50 complexes.
SO The EMBO journal, (1999 Sep 1) Vol. 18, No. 17, pp. 4766-78.
Journal code: 8208664. ISSN: 0261-4189.
AU Heissmeyer V; Krappmann D; Wulczyn F G; Scheidereit C
AN 1999400621 MEDLINE

L85 ANSWER 86 OF 104 MEDLINE on STN DUPLICATE 66
TI IkappaB kinase complex is an intracellular target for endotoxic
lipopolysaccharide in human monocytic cells.
SO Blood, (1999 Sep 1) Vol. 94, No. 5, pp. 1711-6.
Journal code: 7603509. ISSN: 0006-4971.
AU Hawiger J; Veach R A; Liu X Y; Timmons S; Ballard D W
AN 1999409043 MEDLINE

L85 ANSWER 87 OF 104 MEDLINE on STN DUPLICATE 67
TI IkappaB kinase (IKK)-associated protein 1, a common component of the
heterogeneous IKK complex.
SO Molecular and cellular biology, (1999 Feb) Vol. 19, No. 2, pp. 1526-38.
Journal code: 8109087. ISSN: 0270-7306.
AU Mercurio F; Murray B W; Shevchenko A; Bennett B L; Young D B; Li J W;
Pascual G; Motiwala A; Zhu H; Mann M; Manning A M
AN 1999108125 MEDLINE

L85 ANSWER 88 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Positive and negative regulation of IκB kinase activity through IKKβ subunit phosphorylation
SO Jikken Igaku (1999), 17(11), 1329-1332
CODEN: JIIGEF; ISSN: 0288-5514
AU Hayakawa, Makio
AN 1999:482242 HCAPLUS
DN 131:140892

L85 ANSWER 89 OF 104 MEDLINE on STN DUPLICATE 68
TI Carbachol activates IkappaB kinase in isolated canine gastric parietal cells.
SO Biochemical and biophysical research communications, (1999 Aug 11) Vol. 261, No. 3, pp. 877-84.
Journal code: 0372516. ISSN: 0006-291X.
AU Todisco A; Ramamoorthy S; Pausawasdi N; Tacey K
AN 1999373172 MEDLINE

L85 ANSWER 90 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI The IκB kinase: a master regulator of NF-κB, innate immunity, and epidermal differentiation
SO Cold Spring Harbor Symposia on Quantitative Biology (1999), 64(Signaling and Gene Expression in the Immune System), 491-503
CODEN: CSHSAZ; ISSN: 0091-7451
AU Delhase, M.; Karin, M.
AN 2000:401237 HCAPLUS
DN 134:55159

L85 ANSWER 91 OF 104 MEDLINE on STN DUPLICATE 69
TI Embryonic lethality, liver degeneration, and impaired NF-kappa B activation in IKK-beta-deficient mice.
SO Immunity, (1999 Apr) Vol. 10, No. 4, pp. 421-9.
Journal code: 9432918. ISSN: 1074-7613.
AU Tanaka M; Fuentes M E; Yamaguchi K; Durnin M H; Dalrymple S A; Hardy K L; Goeddel D V
AN 1999244191 MEDLINE

L85 ANSWER 92 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Identification of the gene variations in human IKKA
SO Immunogenetics (1999), 50(5/6), 363-365
CODEN: IMNGBK; ISSN: 0093-7711
AU Hagiwara, K.; Tsuchiya, N.; Takazoe, M.; Yamamoto, K.; Tokunaga, K.
AN 1999:754857 HCAPLUS
DN 134:96035

L85 ANSWER 93 OF 104 MEDLINE on STN DUPLICATE 70
TI All three IkappaB isoforms and most Rel family members are stably associated with the IkappaB kinase 1/2 complex.
SO European journal of biochemistry / FEBS, (1999 Jan) Vol. 259, No. 1-2, pp. 253-61.
Journal code: 0107600. ISSN: 0014-2956.
AU Heilker R; Freuler F; Pulfer R; Di Padova F; Eder J
AN 1999115448 MEDLINE

L85 ANSWER 94 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 71
TI NF- Kappa B activation by tumour necrosis factor requires the Akt serine-threonine kinase
SO Nature, (19990902) vol. 401, no. 6748, pp. 82-85.
ISSN: 0028-0836.
AU Ozes, O.N.; Mayo, L.D.; Gustin, J.A.; Pfeffer, S.R.; Pfeffer, L.M.; Donner, D.B.*
AN 1999:93511 LIFESCI

L85 ANSWER 95 OF 104 MEDLINE on STN DUPLICATE 72

TI   Coordinate regulation of IkappaB kinases by mitogen-activated protein kinase kinase kinase 1 and NF-kappaB-inducing kinase.
SO   Molecular and cellular biology, (1998 Dec) Vol. 18, No. 12, pp. 7336-43. Journal code: 8109087. ISSN: 0270-7306.
AU   Nemoto S; DiDonato J A; Lin A
AN   1999038238   MEDLINE

L85 ANSWER 96 OF 104   MEDLINE on STN   DUPLICATE 73
TI   Differential regulation of IkappaB kinase alpha and beta by two upstream kinases, NF-kappaB-inducing kinase and mitogen-activated protein kinase/ERK kinase kinase-1.
SO   Proceedings of the National Academy of Sciences of the United States of America, (1998 Mar 31) Vol. 95, No. 7, pp. 3537-42.
Journal code: 7505876. ISSN: 0027-8424.
AU   Nakano H; Shindo M; Sakon S; Nishinaka S; Mihara M; Yagita H; Okumura K
AN   1998188238   MEDLINE

L85 ANSWER 97 OF 104   MEDLINE on STN   DUPLICATE 74
TI   Direct phosphorylation of IkappaB by IKKalpha and IKKbeta: discrimination between free and NF-kappaB-bound substrate.
SO   Science (New York, N.Y.), (1998 Aug 28) Vol. 281, No. 5381, pp. 1360-3. Journal code: 0404511. ISSN: 0036-8075.
AU   Zandi E; Chen Y; Karin M
AN   1998387927   MEDLINE

L85 ANSWER 98 OF 104   SCISEARCH   COPYRIGHT (c) 2008 The Thomson Corporation on STN   DUPLICATE 75
TI   The IKK signalsome: A multi-protein signaling complex regulating NF-kappa B activation
SO   FASEB JOURNAL, (24 APR 1998) Vol. 12, No. 8, Supp. [S], pp. A1302-A1302. MA D3.
ISSN: 0892-6638.
AU   Mercurio F
AN   1999:959927   SCISEARCH

L85 ANSWER 99 OF 104   MEDLINE on STN   DUPLICATE 76
TI   IKK-gamma is an essential regulatory subunit of the IkappaB kinase complex.
SO   Nature, (1998 Sep 17) Vol. 395, No. 6699, pp. 297-300.
Journal code: 0410462. ISSN: 0028-0836.
AU   Rothwarf D M; Zandi E; Natoli G; Karin M
AN   1998421680   MEDLINE

L85 ANSWER 100 OF 104   BIOSIS   COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI   IKK-gamma is an essential regulatory subunit of the IkappaB kinase complex.
SO   Nature (London), (Sept. 17, 1998) Vol. 39, No. 6699, pp. 297-300. print.
CODEN: NATUAS. ISSN: 0028-0836.
AU   Rothwarf, David M.; Zandi, Ebrahim; Natoll, Gioacchino; Karin, Michaelo [Reprint author]
AN   1998:446874   BIOSIS

L85 ANSWER 101 OF 104   HCAPLUS   COPYRIGHT 2008 ACS on STN
TI   IκB kinase-β: NF-κB activation and complex formation with IκB kinase-α and NIK
SO   Science (Washington, D. C.) (1997), 278(5339), 866-869
CODEN: SCIEAS; ISSN: 0036-8075
AU   Woronicz, John D.; Gao, Xiong; Cao, Zhaodan; Rothe, Mike; Goeddel, David V.
AN   1997:698007   HCAPLUS
DN   128:46315

L85 ANSWER 102 OF 104   HCAPLUS   COPYRIGHT 2008 ACS on STN
TI   IKK-1 and IKK-2: cytokine-activated IκB kinases essential for

NF-κB activation
SO Science (Washington, D. C.) (1997), 278(5339), 860-866
CODEN: SCIEAS; ISSN: 0036-8075
AU Mercurio, Frank; Zhu, Hengyi; Murray, Brion W.; Shevchenko, Andrej; Bennett, Brydon L.; Li, Jian wu; Young, David B.; Barbosa, Miguel; Mann, Matthias
AN 1997:697994 HCAPLUS
DN 128:59824

L85 ANSWER 103 OF 104 MEDLINE on STN DUPLICATE 77
TI A cytokine-responsive IkappaB kinase that activates the transcription factor NF-kappaB.
SO Nature, (1997 Aug 7) Vol. 388, No. 6642, pp. 548-54.
Journal code: 0410462. ISSN: 0028-0836.
AU DiDonato J A; Hayakawa M; Rothwarf D M; Zandi E; Karin M
AN 97394468 MEDLINE

L85 ANSWER 104 OF 104 MEDLINE on STN DUPLICATE 78
TI The IkappaB kinase complex (IKK) contains two kinase subunits, IKKalpha and IKKbeta, necessary for IkappaB phosphorylation and NF-kappaB activation.
SO Cell, (1997 Oct 17) Vol. 91, No. 2, pp. 243-52.
Journal code: 0413066. ISSN: 0092-8674.
AU Zandi E; Rothwarf D M; Delhase M; Hayakawa M; Karin M
AN 1998004227 MEDLINE

=>
=> d ab 16,43,46,47,49,50,53,54,56,62-64,66,67,70-73,81-83,88,95,96,98,101,102,104

L85 ANSWER 16 OF 104 MEDLINE on STN DUPLICATE 12
AB IKKgamma/NEMO is a protein that is critical for the assembly of the high molecular weight IkappaB kinase (IKK) complex. To investigate the role of IKKgamma/NEMO in the assembly of the IKK complex, we conducted a series of experiments in which the chromatographic distribution of extracts prepared from cells transiently expressing epitope-tagged IKKgamma/NEMO and the IKKs were examined. When expressed alone following transfection, IKKalpha and IKKbeta were present in low molecular weight complexes migrating between 200 and 400 kDa. However, when coexpressed with IKKgamma/NEMO, both IKKalpha and IKKbeta migrated at approximately 600 kDa which was similar to the previously described IKK complex that is activated by cytokines such as tumor necrosis factor-alpha. When either IKKalpha or IKKbeta was expressed alone with IKKgamma/NEMO, IKKbeta but not IKKalpha migrated in the higher molecular weight IKK complex. Constitutively active or inactive forms of IKKbeta were both incorporated into the high molecular weight IKK complex in the presence of IKKgamma/NEMO. The amino-terminal region of IKKgamma/NEMO, which interacts directly with IKKbeta, was required for formation of the high molecular weight IKK complex and for stimulation of IKKbeta kinase activity. These results suggest that recruitment of the IKKs into a high molecular complex by IKKgamma/NEMO is a crucial step involved in IKK function.

L85 ANSWER 43 OF 104 MEDLINE on STN DUPLICATE 34
AB To understand the mechanism of activation of the IkappaB kinase (IKK) complex in the tumor necrosis factor (TNF) receptor 1 pathway, we examined the possibility that oligomerization of the IKK complex triggered by ligand-induced trimerization of the TNF receptor 1 complex is responsible for activation of the IKKs. Gel filtration analysis of the IKK complex revealed that TNFalpha stimulation induces a large increase in the size of this complex, suggesting oligomerization. Substitution of the C-terminal region of IKKgamma, which interacts with RIP, with a truncated DR4 lacking its cytoplasmic death domain, produced a molecule that could induce IKK and NF-kappaB activation in cells in response to TRAIL.

Enforced oligomerization of the N terminus of IKKgamma or truncated IKKalpha or IKKbeta lacking their serine-cluster domains can also induce IKK and NF-kappaB activation. These data suggest that IKKgamma functions as a signaling adaptor between the upstream regulators such as RIP and the IKKs and that oligomerization of the IKK complex by upstream regulators is a critical step in activation of this complex.

L85 ANSWER 46 OF 104 MEDLINE on STN DUPLICATE 37

AB Nod1 is an Apaf-1-like molecule composed of a caspase-recruitment domain (CARD), nucleotide-binding domain, and leucine-rich repeats that associates with the CARD-containing kinase RICK and activates nuclear factor kappaB (NF-kappaB). We show that self-association of Nod1 mediates proximity of RICK and the interaction of RICK with the gamma subunit of the IkappaB kinase (IKKgamma). Similarly, the RICK-related kinase RIP associated via its intermediate region with IKKgamma. A mutant form of IKKgamma deficient in binding to IKKalpha and IKKbeta inhibited NF-kappaB activation induced by RICK or RIP. Enforced oligomerization of RICK or RIP as well as of IKKgamma, IKKalpha, or IKKbeta was sufficient for induction of NF-kappaB activation. Thus, the proximity of RICK, RIP, and IKK complexes may play an important role for NF-kappaB activation during Nod1 oligomerization or trimerization of the tumor necrosis factor alpha receptor.

L85 ANSWER 47 OF 104 MEDLINE on STN DUPLICATE 38

AB Nuclear factor kappa B (NF-kappaB) is a ubiquitous, inducible transcription factor that regulates the initiation and progression of immune and inflammatory stress responses. NF-kappaB activation depends on phosphorylation and degradation of its inhibitor protein, IkappaB, initiated by an IkappaB kinase (IKK) complex. This IKK complex includes a catalytic heterodimer composed of IkappaB kinase 1 (IKK1) and IkappaB kinase 2 (IKK2) as well as a regulatory adaptor subunit, NF-kappaB essential modulator. To better understand the role of IKKs in NF-kappaB activation, we have cloned, expressed, purified, and characterized the physiological isoform, the rhIKK1/rhIKK2 heterodimer. We compared its kinetic properties with those of the homodimers rhIKK1 and rhIKK2 and a constitutively active rhIKK2 (S177E, S181E) mutant. We demonstrate activation of these recombinantly expressed IKKs by phosphorylation during expression in a baculoviral system. The K(m) values for ATP and IkappaBalpha peptide for the rhIKK1/rhIKK2 heterodimer are 0.63 and 0.60 micrometer, respectively, which are comparable to those of the IKK2 homodimer. However, the purified rhIKK1/rhIKK2 heterodimer exhibits the highest catalytic efficiency (k(cat)/K(m)) of 47.50 h(-1) micrometer(-1) using an IkappaBalpha peptide substrate compared with any of the other IKK isoforms, including rhIKK2 (17.44 h(-1) micrometer(-1)), its mutant rhIKK2 (S177E, S181E, 1.18 h(-1) micrometer(-1)), or rhIKK1 (0.02 h(-1) micrometer(-1)). Kinetic analysis also indicates that, although both products of the kinase reaction, ADP and a phosphorylated IkappaBalpha peptide, exhibited competitive inhibitory kinetics, only ADP with the low K(i) of 0.77 micrometer may play a physiological role in regulation of the enzyme activity.

L85 ANSWER 49 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN

AB Pathogens, inflammatory signals, and stress cause acute transcriptional responses in cells. The induced expression of genes in response to these signals invariably involves transcription factors of the NF-κB and AP-1/ATF families. Activation of NF-κB factors is thought to be mediated primarily via IκB kinases (IKK), whereas that of AP-1/ATF can be mediated by stress-activated protein kinases (SAPKs; also named Jun kinases or JNKs). IKKα and IKKβ are two catalytic subunits of a core IKK complex that also contains the regulatory subunit NEMO (NF-κB essential modulator)/IKKγ. The latter protein is essential for activation of the IKKs, but its mechanism of action is not known. Here we describe the mol. cloning of CIKS (connection to IKK and SAPK/JNK), a previously unknown protein that directly interacts with

NEMO/IKKγ in cells. When ectopically expressed, CIKS stimulates IKK and SAPK/JNK kinases and it transactivates an NF-κB-dependent reporter. Activation of NF-κB is prevented in the presence of kinase-deficient, interfering mutants of the IKKs. CIKS may help to connect upstream signaling events to IKK and SAPK/JNK modules. CIKS could coordinate the activation of two stress-induced signaling pathways, functions reminiscent of those noted for tumor necrosis factor receptor-associated factor adaptor proteins.

L85 ANSWER 50 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN

AB FIP3, isolated as a type 2 adenovirus E3-14.7-kDa interacting protein, is an essential component of the multimeric IκB-α kinase (IKK) complex and has been shown to interact with various components (Fas receptor-interacting protein, NF-κB-inducing kinase, IKKβ) of the NF-κB activation pathway. FIP3 has also been shown to repress basal and tumor necrosis factor (TNF) α-induced NF-κB activity as well as to induce cell death when overexpressed. The adenovirus E3-14.7-kDa protein (E3-14.7K) is an inhibitor of TNFα-induced cell death. In the current study, we generated deletion mutants to map the domains of FIP3, which are responsible for its various functions. The NF-κB inhibitory activity and the E3-14.7K binding domains were mapped at the carboxyl half of the FIP3 protein. We also found that the carboxyl-terminal half of FIP3 blocked TNFα-induced IκB-α phosphorylation and subsequent degradation, which suggests that the stabilization of the cytoplasmic inhibitor of NF-κB underlies the FIP3 inhibition of NF-κB activity. The amino-terminal 119 amino acids were responsible for the FIP3-IKKβ and FIP3-IKKα interaction, and the middle of the protein (amino acids 201-300) appeared to be both the FIP3 self-association domain as well as the FIP3-Fas receptor-interacting protein interaction domain. Thus, FIP3 might serve as a scaffold protein to organize the various components of the IκB-α kinase complex. Whereas the full-length protein is required for efficient cell death, the amino-terminal 200 amino acids are sufficient to cause rounding and detachment of the cells from the monolayer.

L85 ANSWER 53 OF 104 MEDLINE on STN DUPLICATE 41

AB NF-kappaB is regulated by inhibitor proteins (IkappaBs), which retain NF-kappaB in the cytoplasm. Signal-induced phosphorylation by the IkappaB-kinase complex containing the IkappaB-kinases 1 and 2 (IKK-1/2 or IKK-alpha/beta) and subsequent degradation of the IkappaB proteins are prerequisites for NF-kappaB activation. Many signals induce NF-kappaB, one of them being oncogenic Raf kinase. We investigated whether NF-kappaB induction is critical for Raf-mediated transformation. Here, we demonstrate that inhibition of NF-kappaB interferes with transformation by the Raf-oncogene, and we characterized the mechanism of NF-kappaB induction by activated Raf kinase and the tumor promoter phorbol 12-myristate 13-acetate (PMA). NF-kappaB activation by PMA and Raf critically depends on the IkappaB-kinase complex, most notably on IKK-2. A major signaling pathway induced by Raf is the mitogenic cytoplasmic kinase cascade. However, different inhibitors of this cascade do not affect PMA- and Raf-mediated NF-kappaB activation. Raf does not phosphorylate the IkappaB-kinase proteins directly. Raf rather synergizes with another membrane shuttle kinase MEKK1, and Raf-mediated activation of NF-kappaB is blocked by a dominant negative form of MEKK1. These results suggest that Raf induction of NF-kappaB is relayed by MEKK1, but not by the classical mitogenic cytoplasmic kinase cascade.

L85 ANSWER 54 OF 104 MEDLINE on STN DUPLICATE 42

AB The interferon (IFN)-induced double-stranded RNA-activated protein kinase PKR mediates inhibition of protein synthesis through phosphorylation of the alpha subunit of eukaryotic initiation factor 2 (eIF2alpha) and is also involved in the induction of the IFN gene through the activation of the transcription factor NF-kappaB. NF-kappaB is retained in the

cytoplasm through binding to its inhibitor IkappaBalpha. The critical step in NF-kappaB activation is the phosphorylation of IkappaBalpha by the IkappaB kinase (IKK) complex.
This activity releases NF-kappaB from IkappaBalpha and allows its translocation to the nucleus. Here, we have studied the ability of PKR to activate NF-kappaB in a reporter assay and have shown for the first time that two catalytically inactive PKR mutants, PKR/KR296 and a deletion mutant (PKR/Del42) which lacks the potential eIF2alpha-binding domain, can also activate NF-kappaB. This result indicated that NF-kappaB activation by PKR does not require its kinase activity and that it is independent of the PKR-eIF2alpha relationship. Transfection of either wild-type PKR or catalytically inactive PKR in PKR(0/0) mouse embryo fibroblasts resulted in the activation of the IKK complex. By
using a glutathione S-transferase pull-down assay, we showed that PKR interacts with the IKKbeta subunit of the IKK complex. This interaction apparently does not require the integrity of the IKK complex, as it was found to occur with extracts from cells deficient in the NF-kappaB essential modulator, one of the components of the IKK complex. Therefore, our results reveal a novel pathway by which PKR can modulate the NF-kappaB signaling pathway without using its kinase activity.

L85 ANSWER 56 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN

AB The phosphorylation of IκB by the multiprotein IκB kinase complex (IKC) precedes the activation of transcription factor NF-κB, a key regulator of the inflammatory response. Here we identified the mixed-lineage group kinase 3 (MLK3) as an activator of NF-κB. Expression of the wild-type form of this mitogen-activated protein kinase kinase kinase (MAPKKK) induced nuclear immigration, DNA binding, and transcriptional activity of NF-κB. MLK3 directly phosphorylated and thus activated IκB kinase alpha (IKKα) and IKKβ, revealing its function as an IκB kinase kinase (IKKK). MLK3 cooperated with the other two IKKKs, MEKK1 and NF-κB-inducing kinase, in the induction of IKK activity. MLK3 bound to components of the IKC in vivo. This protein-protein interaction was dependent on the central leucine zipper region of MLK3. A kinase-deficient version of MLK3 strongly impaired NF-κB-dependent transcription induced by T-cell costimulation but not in response to tumor necrosis factor alpha or interleukin-1. Accordingly, endogenous MLK3 was phosphorylated and activated by T-cell costimulation but not by treatment of cells with tumor necrosis factor alpha or interleukin-1. A dominant neg. version of MLK3 inhibited NF-κB- and CD28RE/AP-dependent transcription elicited by the Rho family GTPases Rac and Cdc42, thereby providing a novel link between these GTPases and the IKC.

L85 ANSWER 62 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 48

AB Besides its known role as a translational controlling factor, the double stranded RNA-dependent protein kinase (PKR) is a key transcriptional regulator exerting antiviral and antitumoural activities. We have recently described that induction of NF- Kappa B by PKR is involved in apoptosis commitment. To define how PKR mediates NF- Kappa B activation by dsRNA, we have used two different approaches, one based on expression of PKR by a vaccinia virus (VV) recombinant and the other based on induction of endogenous PKR by poly I:C (pIC) treatment. We found that NF- Kappa B complexes induced by PKR are composed primarily of p50-p65 heterodimers and also of c-rel-p50 heterodimers. As described for other stimuli, following pIC treatment, PKR phosphorylates the NF- Kappa B inhibitor I Kappa B alpha at serine 32 before degradation. Expression by VV recombinants of IKK1 or IKK2 dominant negative mutants together with PKR showed inhibition of PKR-induced NF- Kappa B activation, as measured both by gel shift and luciferase reporter assays. Immunoprecipitation analysis revealed that PKR interacts with the IKK complex. Our findings demonstrate that physiological function(s) of PKR involve activation of the I Kappa B kinase complex.

L85 ANSWER 63 OF 104 MEDLINE on STN DUPLICATE 49

AB Signal-induced nuclear expression of the eukaryotic NF-kappaB transcription factor involves the stimulatory action of select mitogen-activated protein kinase kinase kinases on the IkappaB kinases (IKKalpha and IKKbeta) which reside in a macromolecular signaling complex termed the signalsome. While genetic studies indicate that IKKbeta is the principal kinase involved in proinflammatory cytokine-induced IkappaB phosphorylation, the function of the equivalently expressed IKKalpha is less clear. Here we demonstrate that assembly of IKKalpha with IKKbeta in the heterodimeric signalsome serves two important functions: (i) in unstimulated cells, IKKalpha inhibits the constitutive IkappaB kinase activity of IKKbeta; (ii) in activated cells, IKKalpha kinase activity is required for the induction of IKKbeta. The introduction of kinase-inactive IKKalpha, activation loop mutants of IKKalpha, or IKKalpha antisense RNA into 293 or HeLa cells blocks NIK (NF-kappaB-inducing kinase)-induced phosphorylation of the IKKbeta activation loop occurring in functional signalsomes. In contrast, catalytically inactive mutants of IKKbeta do not block NIK-mediated phosphorylation of IKKalpha in these macromolecular signaling complexes. This requirement for kinase-proficient IKKalpha to activate IKKbeta in heterodimeric IKK signalsomes is also observed with other NF-kappaB inducers, including tumor necrosis factor alpha, human T-cell leukemia virus type 1 Tax, Cot, and MEKK1. Conversely, the theta isoform of protein kinase C, which also induces NF-kappaB/Rel, directly targets IKKbeta for phosphorylation and activation, possibly acting through homodimeric IKKbeta complexes. Together, our findings indicate that activation of the heterodimeric IKK complex by a variety of different inducers proceeds in a directional manner and is dependent on the kinase activity of IKKalpha to activate IKKbeta.

L85 ANSWER 64 OF 104 MEDLINE on STN DUPLICATE 50

AB Phosphorylation of IkappaB by the IkappaB kinase (IKK) complex is a critical step leading to IkappaB degradation and activation of transcription factor NF-kappaB. The IKK complex contains two catalytic subunits, IKKalpha and IKKbeta, the latter being indispensable for NF-kappaB activation by pro-inflammatory cytokines. Although IKK is activated by phosphorylation of the IKKbeta activation loop, the physiological IKK kinases that mediate responses to extracellular stimuli remain obscure. Here we describe an IKK-related kinase, named NAK (NF-kappaB-activating kinase), that can activate IKK through direct phosphorylation. NAK induces IkappaB degradation and NF-kappaB activity through IKKbeta. Endogenous NAK is activated by phorbol ester tumour promoters and growth factors, whereas catalytically inactive NAK specifically inhibits activation of NF-kappaB by protein kinase C-epsilon (PKCepsilon). Thus, NAK is an IKK kinase that may mediate IKK and NF-kappaB activation in response to growth factors that stimulate PKCepsilon activity.

L85 ANSWER 66 OF 104 MEDLINE on STN DUPLICATE 52

AB Here we report the identification of a novel PMA-inducible IkappaB kinase complex, distinct from the well-characterized high-molecular weight IkappaB kinase complex containing IKKalpha, IKKbeta, and IKKgamma. We have characterized one kinase from this complex, which we designate IKKepsilon. Although recombinant IKKepsilon directly phosphorylates only serine 36 of IKBalpha, the PMA-activated endogenous IKKepsilon complex phosphorylates both critical serine residues. Remarkably, this activity is due to the presence of a distinct kinase in this complex. A dominant-negative mutant of IKKepsilon blocks induction of NF-kappaB by both PMA and activation of the T cell receptor but has no effect on the activation of NF-KB by TNFalpha or IL-1. These observations indicate that the activation of NF-kappaB requires multiple distinct IkappaB kinase complexes, which respond to both overlapping and discrete signaling pathways.

L85 ANSWER 67 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN

AB Delhase et al. take issue with our claim that Akt induces activation of

NF- Kappa B by phosphorylating IKK alpha , contending that IKK alpha plays no role in the activation by TNF of NF- Kappa B, and consequently that Akt could not affect NF- Kappa B through IKK alpha . They point out that Hu et al. have shown that cells deficient in IKK alpha have normal TNF- Kappa B activity, but this has been refuted by Li et al., who reported significant reduction of TNF-induced NF- Kappa B in IKK alpha -deficient cells. Indeed, the observations of Hu et al. show that degradation of I Kappa B alpha is diminished in cells from IKK alpha -deficient mice and are therefore not consistent with the conclusion that IKK alpha plays no role in TNF induction of NF- Kappa B. Furthermore, deficiency of IKK beta only partially impairs TNF-induced NF- Kappa B activation, which reserves a role for IKK alpha in this pathway. Others have shown that activation of the IKK complex is dependent on the kinase activity of IKK alpha to activate IKK beta . Thus, strong evidence supports a role for IKK alpha in TNF induction of NF- Kappa B. Delhase et al. only tested the role of Akt on NF- Kappa B activation in HeLa cells in which they did not observe activation of Akt by TNF. As the involvement of inflammatory stimuli, including TNF, TRAF-6, IL-1 and LPS in PI(3)K/Akt activation is well documented, Delhase et al. should have investigated the Akt/NF- Kappa B connection in some of these systems.

L85 ANSWER 70 OF 104 MEDLINE on STN DUPLICATE 54

AB The NF-kappaB family of transcription factors plays a crucial role in the immune, inflammatory and apoptotic responses. These proteins are normally found in the cytoplasm, retained by interaction with an inhibitory molecule called IkappaB. Activation of the NF-kappaB signalling cascade results in phosphorylation and degradation of IkappaB, allowing nuclear translocation of the NF-kappaB complexes. The recent identification of a high-molecular-weight complex containing two kinases and a regulatory subunit has led to a flurry of new results that shed light on some of the most complex mechanisms contributing to the exquisite regulation of NF-kappaB activity.

L85 ANSWER 71 OF 104 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

L85 ANSWER 72 OF 104 MEDLINE on STN DUPLICATE 55

AB NF-kappaB is a critical activator of genes involved in inflammation and immunity. Pro-inflammatory cytokines activate the IkappaB kinase (IKK) complex that phosphorylates the NF-kappaB inhibitors, triggering their conjugation with ubiquitin and subsequent degradation. Freed NF-kappaB dimers translocate to the nucleus and induce target genes, including the one for cyclo-oxygenase 2 (COX2), which catalyses the synthesis of pro-inflammatory prostaglandins, in particular PGE. At late stages of inflammatory episodes, however, COX2 directs the synthesis of anti-inflammatory cyclopentenone prostaglandins, suggesting a role for these molecules in the resolution of inflammation. Cyclopentenone prostaglandins have been suggested to exert anti-inflammatory activity through the activation of peroxisome proliferator-activated receptor-gamma. Here we demonstrate a novel mechanism of antiinflammatory activity which is based on the direct inhibition and modification of the IKKbeta subunit of IKK. As IKKbeta is responsible for the activation of NF-kappaB by pro-inflammatory stimuli, our findings explain how cyclopentenone prostaglandins function and can be used to improve the utility of COX2 inhibitors.

L85 ANSWER 73 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN

AB NF- Kappa B is a heterodimeric transcription factor that plays a key role in inflammatory and immune responses. In nonstimulated cells, NF- Kappa B dimers are maintained in the cytoplasm through interaction with inhibitory proteins, the I Kappa Bs. In response to cell stimulation, mainly by proinflammatory cytokines, a multisubunit protein kinase, the I Kappa B kinase (IKK), is rapidly activated and phosphorylates two critical serines in the N-terminal regulatory domain of the I Kappa Bs. Phosphorylated I

Kappa Bs are recognized by a specific E3 ubiquitin ligase complex and undergo polyubiquitination which targets them for rapid degradation by the 26S proteasome. NF- Kappa B dimers, which are spared from degradation, translocate to the nucleus to activate gene transcription. There is strong biochemical and genetic evidence that the IKK complex, which consists of two catalytic subunits, IKK alpha and IKK beta , and a regulatory subunit, IKK gamma , is the master regulator of NF- Kappa B-mediated innate immune and inflammatory responses. In the absence of IKK gamma , which normally connects IKK to upstream activators, no IKK or NF- Kappa B activation can occur. Surprisingly, however, of the two catalytic subunits, only IKK beta is essential for NF- Kappa B activation in response to proinflammatory stimuli. The second catalytic subunit, IKK alpha , plays a critical role in developmental processes, in particular formation and differentiation of the epidermis.

L85 ANSWER 81 OF 104 MEDLINE on STN DUPLICATE 61

AB Rel/NF-kappaB transcription factors are primarily regulated by association with inhibitor IkappaB proteins. Thus, in most cells NF-kappaB exists in the cytoplasm in an inactive complex bound to IkappaB. Most agents that activate NF-kappaB do so through a common pathway based on phosphorylation-induced, proteasome-mediated degradation of IkappaB. The key regulatory step in this pathway

```
* * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 11:59:24 ON 22 JAN 2008

=> fil .bec
COST IN U.S. DOLLARS                                  SINCE FILE     TOTAL
                                                           ENTRY   SESSION
FULL ESTIMATED COST                                         0.21      0.21

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
       ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 11:59:48 ON 22 JAN 2008
ALL COPYRIGHTS AND RESTRICTIONS APPLY.  SEE HELP USAGETERMS FOR DETAILS.

11 FILES IN THE FILE LIST

=> s ikk?
FILE 'MEDLINE'
L1          3116 IKK?

FILE 'SCISEARCH'
L2          2633 IKK?

FILE 'LIFESCI'
L3           993 IKK?

FILE 'BIOTECHDS'
L4           109 IKK?

FILE 'BIOSIS'
L5          2462 IKK?

FILE 'EMBASE'
L6          1886 IKK?

FILE 'HCAPLUS'
L7          2597 IKK?

FILE 'NTIS'
L8            69 IKK?

FILE 'ESBIOBASE'
L9          1640 IKK?

FILE 'BIOTECHNO'
L10          490 IKK?

FILE 'WPIDS'
L11          279 IKK?

TOTAL FOR ALL FILES
L12        16274 IKK?

=> s l12(5a)complex?
FILE 'MEDLINE'
          712679 COMPLEX?
L13          445 L1 (5A)COMPLEX?

FILE 'SCISEARCH'
         1284180 COMPLEX?
L14          472 L2 (5A)COMPLEX?

FILE 'LIFESCI'
          233633 COMPLEX?
L15          276 L3 (5A)COMPLEX?
```

```
FILE 'BIOTECHDS'
         32542 COMPLEX?
L16          7 L4  (5A)COMPLEX?

FILE 'BIOSIS'
        726300 COMPLEX?
L17        486 L5  (5A)COMPLEX?

FILE 'EMBASE'
        627452 COMPLEX?
L18        412 L6  (5A)COMPLEX?

FILE 'HCAPLUS'
       1789332 COMPLEX?
L19        485 L7  (5A)COMPLEX?

FILE 'NTIS'
         85057 COMPLEX?
L20         10 L8  (5A)COMPLEX?

FILE 'ESBIOBASE'
        291286 COMPLEX?
L21        387 L9  (5A)COMPLEX?

FILE 'BIOTECHNO'
        170931 COMPLEX?
L22        171 L10(5A)COMPLEX?

FILE 'WPIDS'
        248039 COMPLEX?
L23         19 L11(5A)COMPLEX?

TOTAL FOR ALL FILES
L24       3170 L12(5A) COMPLEX?

=> s l24(15a)(express? or coexpress?)
FILE 'MEDLINE'
       1159171 EXPRESS?
         15512 COEXPRESS?
L25         26 L13(15A)(EXPRESS? OR COEXPRESS?)

FILE 'SCISEARCH'
       1482015 EXPRESS?
         15947 COEXPRESS?
L26         25 L14(15A)(EXPRESS? OR COEXPRESS?)

FILE 'LIFESCI'
        475906 EXPRESS?
          7507 COEXPRESS?
L27         28 L15(15A)(EXPRESS? OR COEXPRESS?)

FILE 'BIOTECHDS'
        164701 EXPRESS?
           818 COEXPRESS?
L28          2 L16(15A)(EXPRESS? OR COEXPRESS?)

FILE 'BIOSIS'
       1409296 EXPRESS?
         15735 COEXPRESS?
L29         29 L17(15A)(EXPRESS? OR COEXPRESS?)

FILE 'EMBASE'
       1066834 EXPRESS?
         14679 COEXPRESS?
L30         22 L18(15A)(EXPRESS? OR COEXPRESS?)
```

```
FILE 'HCAPLUS'
       1408902 EXPRESS?
         14817 COEXPRESS?
L31         26 L19(15A)(EXPRESS? OR COEXPRESS?)

FILE 'NTIS'
         41785 EXPRESS?
            39 COEXPRESS?
L32          3 L20(15A)(EXPRESS? OR COEXPRESS?)

FILE 'ESBIOBASE'
        681964 EXPRESS?
         11527 COEXPRESS?
L33         42 L21(15A)(EXPRESS? OR COEXPRESS?)

FILE 'BIOTECHNO'
        452182 EXPRESS?
          7587 COEXPRESS?
L34         17 L22(15A)(EXPRESS? OR COEXPRESS?)

FILE 'WPIDS'
        155738 EXPRESS?
           212 COEXPRESS?
L35          3 L23(15A)(EXPRESS? OR COEXPRESS?)

TOTAL FOR ALL FILES
L36        223 L24(15A)(EXPRESS? OR COEXPRESS?)

=> s l24(15a)(yeast or saccharomyces)
FILE 'MEDLINE'
         99971 YEAST
         84135 SACCHAROMYCES
L37          1 L13(15A)(YEAST OR SACCHAROMYCES)

FILE 'SCISEARCH'
        131926 YEAST
         85192 SACCHAROMYCES
L38          1 L14(15A)(YEAST OR SACCHAROMYCES)

FILE 'LIFESCI'
         70208 YEAST
         42153 SACCHAROMYCES
L39          0 L15(15A)(YEAST OR SACCHAROMYCES)

FILE 'BIOTECHDS'
         45631 YEAST
         15167 SACCHAROMYCES
L40          1 L16(15A)(YEAST OR SACCHAROMYCES)

FILE 'BIOSIS'
        157519 YEAST
         83697 SACCHAROMYCES
L41          1 L17(15A)(YEAST OR SACCHAROMYCES)

FILE 'EMBASE'
         88908 YEAST
         48270 SACCHAROMYCES
L42          1 L18(15A)(YEAST OR SACCHAROMYCES)

FILE 'HCAPLUS'
        212458 YEAST
         93026 SACCHAROMYCES
L43          4 L19(15A)(YEAST OR SACCHAROMYCES)
```

```
FILE 'NTIS'
           1468 YEAST
            486 SACCHAROMYCES
L44           0 L20(15A)(YEAST OR SACCHAROMYCES)

FILE 'ESBIOBASE'
          58317 YEAST
          27061 SACCHAROMYCES
L45           1 L21(15A)(YEAST OR SACCHAROMYCES)

FILE 'BIOTECHNO'
          50373 YEAST
          29288 SACCHAROMYCES
L46           1 L22(15A)(YEAST OR SACCHAROMYCES)

FILE 'WPIDS'
          38851 YEAST
           6503 SACCHAROMYCES
L47           1 L23(15A)(YEAST OR SACCHAROMYCES)

TOTAL FOR ALL FILES
L48          12 L24(15A)(YEAST OR SACCHAROMYCES)

=> s (l36 or l48) not 2002-2008/py
FILE 'MEDLINE'
        3729737 2002-2008/PY
                  (20020000-20089999/PY)
L49           9 (L25 OR L37) NOT 2002-2008/PY

FILE 'SCISEARCH'
        6863021 2002-2008/PY
                  (20020000-20089999/PY)
L50           8 (L26 OR L38) NOT 2002-2008/PY

FILE 'LIFESCI'
         791718 2002-2008/PY
L51           9 (L27 OR L39) NOT 2002-2008/PY

FILE 'BIOTECHDS'
         157248 2002-2008/PY
L52           0 (L28 OR L40) NOT 2002-2008/PY

FILE 'BIOSIS'
        3370680 2002-2008/PY
L53          10 (L29 OR L41) NOT 2002-2008/PY

FILE 'EMBASE'
        3286962 2002-2008/PY
L54           8 (L30 OR L42) NOT 2002-2008/PY

FILE 'HCAPLUS'
        7234888 2002-2008/PY
L55          10 (L31 OR L43) NOT 2002-2008/PY

FILE 'NTIS'
          99791 2002-2008/PY
L56           1 (L32 OR L44) NOT 2002-2008/PY

FILE 'ESBIOBASE'
        1931750 2002-2008/PY
L57          12 (L33 OR L45) NOT 2002-2008/PY

FILE 'BIOTECHNO'
         244553 2002-2008/PY
L58          10 (L34 OR L46) NOT 2002-2008/PY
```

```
FILE 'WPIDS'
       5896744 2002-2008/PY
L59           0 (L35 OR L47) NOT 2002-2008/PY

TOTAL FOR ALL FILES
L60          77 (L36 OR L48) NOT 2002-2008/PY

=> s l24(15a)activat?
FILE 'MEDLINE'
        864732 ACTIVAT?
L61         258 L13(15A)ACTIVAT?

FILE 'SCISEARCH'
        989327 ACTIVAT?
L62         245 L14(15A)ACTIVAT?

FILE 'LIFESCI'
        283833 ACTIVAT?
L63         168 L15(15A)ACTIVAT?

FILE 'BIOTECHDS'
         33849 ACTIVAT?
L64           2 L16(15A)ACTIVAT?

FILE 'BIOSIS'
        898689 ACTIVAT?
L65         259 L17(15A)ACTIVAT?

FILE 'EMBASE'
        779739 ACTIVAT?
L66         232 L18(15A)ACTIVAT?

FILE 'HCAPLUS'
       1403184 ACTIVAT?
L67         270 L19(15A)ACTIVAT?

FILE 'NTIS'
         29872 ACTIVAT?
L68           2 L20(15A)ACTIVAT?

FILE 'ESBIOBASE'
        402269 ACTIVAT?
L69         229 L21(15A)ACTIVAT?

FILE 'BIOTECHNO'
        233622 ACTIVAT?
L70          98 L22(15A)ACTIVAT?

FILE 'WPIDS'
        309061 ACTIVAT?
L71           4 L23(15A)ACTIVAT?

TOTAL FOR ALL FILES
L72        1767 L24(15A) ACTIVAT?

=> s l72 not 2002-2008/py
FILE 'MEDLINE'
       3729737 2002-2008/PY
                 (20020000-20089999/PY)
L73          69 L61 NOT 2002-2008/PY

FILE 'SCISEARCH'
       6863021 2002-2008/PY
                 (20020000-20089999/PY)
```

```
L74          70 L62 NOT 2002-2008/PY

FILE 'LIFESCI'
        791718 2002-2008/PY
L75          54 L63 NOT 2002-2008/PY

FILE 'BIOTECHDS'
        157248 2002-2008/PY
L76           0 L64 NOT 2002-2008/PY

FILE 'BIOSIS'
       3370680 2002-2008/PY
L77          71 L65 NOT 2002-2008/PY

FILE 'EMBASE'
       3286962 2002-2008/PY
L78          65 L66 NOT 2002-2008/PY

FILE 'HCAPLUS'
       7234888 2002-2008/PY
L79          80 L67 NOT 2002-2008/PY

FILE 'NTIS'
         99791 2002-2008/PY
L80           0 L68 NOT 2002-2008/PY

FILE 'ESBIOBASE'
       1931750 2002-2008/PY
L81          70 L69 NOT 2002-2008/PY

FILE 'BIOTECHNO'
        244553 2002-2008/PY
L82          60 L70 NOT 2002-2008/PY

FILE 'WPIDS'
       5896744 2002-2008/PY
L83           1 L71 NOT 2002-2008/PY

TOTAL FOR ALL FILES
L84         540 L72 NOT 2002-2008/PY

=> dup rem l84
PROCESSING COMPLETED FOR L84
L85          104 DUP REM L84 (436 DUPLICATES REMOVED)

=> d tot

L85    ANSWER 1 OF 104  Elsevier BIOBASE  COPYRIGHT 2008 Elsevier Science B.V.
       on STN
AN     2007312024    ESBIOBASE
TI     Glutathione depletion down-regulates tumor necrosis factor
       α-induced NF-κB activity via IκB kinase-dependent and
       -independent mechanisms
AU     Lou H.; Kaplowitz N.
CS     N. Kaplowitz, Keck School of Medicine, University of Southern California,
       HMR101, 2011 Zonal Ave., Los Angeles, CA 90033, United States.
       E-mail: kaplowit@usc.edu
SO     Journal of Biological Chemistry, (05 OCT 2007), 282/40 (29470-29481), 42
       reference(s)
       CODEN: JBCHA3  ISSN: 0021-9258  E-ISSN: 1083-351X
DT     Journal; Article
CY     United States
LA     English
SL     English
```

L85 ANSWER 2 OF 104 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V. on STN
AN 2007311536 ESBIOBASE
TI Activation of a subset of genes by IFN-γ requires IKKβ but not interferon-dependent activation of NF-κB
AU Shultz D.B.; Fuller J.D.; Yang Y.; Sizemore N.; Rani M.R.S.; Stark G.R.
CS Dr. G.R. Stark, Department of Molecular Genetics, Cleveland Clinic, 9500 Euclid Avenue, Cleveland, OH 44195, United States.
E-mail: starkg@ccf.org
SO Journal of Interferon and Cytokine Research, (2007), 27/10 (875-883), 24 reference(s)
CODEN: JICRFJ ISSN: 1079-9907
DT Journal; Article
CY United States
LA English
SL English

L85 ANSWER 3 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI NF-κB-activating kinase NAK is an IκB kinase-activating kinase
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
IN Nakanishi, Makoto; Nakayama, Keiichi
AN 2001:767272 HCAPLUS
DN 135:328745

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001292779	A	20011023	JP 2000-110481	20000412

L85 ANSWER 4 OF 104 MEDLINE on STN DUPLICATE 1
TI Complete reconstitution of human IkappaB kinase (IKK) complex in yeast. Assessment of its stoichiometry and the role of IKKgamma on the complex activity in the absence of stimulation.
SO The Journal of biological chemistry, (2001 Sep 28) Vol. 276, No. 39, pp. 36320-6. Electronic Publication: 2001-07-24.
Journal code: 2985121R. ISSN: 0021-9258.
AU Miller B S; Zandi E
AN 2001522209 MEDLINE

L85 ANSWER 5 OF 104 MEDLINE on STN DUPLICATE 2
TI Calmodulin-dependent kinase II mediates T cell receptor/CD3- and phorbol ester-induced activation of IkappaB kinase.
SO The Journal of biological chemistry, (2001 Sep 21) Vol. 276, No. 38, pp. 36008-13. Electronic Publication: 2001-07-24.
Journal code: 2985121R. ISSN: 0021-9258.
AU Hughes K; Edin S; Antonsson A; Grundstrom T
AN 2001512053 MEDLINE

L85 ANSWER 6 OF 104 MEDLINE on STN DUPLICATE 3
TI Cytokine-induced activation of nuclear factor-kappa B is inhibited by hydrogen peroxide through oxidative inactivation of IkappaB kinase.
SO The Journal of biological chemistry, (2001 Sep 21) Vol. 276, No. 38, pp. 35693-700. Electronic Publication: 2001-07-30.
Journal code: 2985121R. ISSN: 0021-9258.
AU Korn S H; Wouters E F; Vos N; Janssen-Heininger Y M
AN 2001512027 MEDLINE

L85 ANSWER 7 OF 104 MEDLINE on STN DUPLICATE 4
TI Identification of a novel A20-binding inhibitor of nuclear factor-kappa B activation termed ABIN-2.
SO The Journal of biological chemistry, (2001 Aug 10) Vol. 276, No. 32, pp. 30216-23. Electronic Publication: 2001-06-04.
Journal code: 2985121R. ISSN: 0021-9258.
AU Van Huffel S; Delaei F; Heyninck K; De Valck D; Beyaert R
AN 2001441674 MEDLINE

L85 ANSWER 8 OF 104 MEDLINE on STN DUPLICATE 5
TI The PTEN tumor suppressor protein inhibits tumor necrosis factor-induced nuclear factor kappa B activity.
SO The Journal of biological chemistry, (2001 Jul 20) Vol. 276, No. 29, pp. 27740-4. Electronic Publication: 2001-05-16.
Journal code: 2985121R. ISSN: 0021-9258.
AU Gustin J A; Maehama T; Dixon J E; Donner D B
AN 2001403609 MEDLINE

L85 ANSWER 9 OF 104 MEDLINE on STN DUPLICATE 6
TI Bcl10 and MALT1, independent targets of chromosomal translocation in malt lymphoma, cooperate in a novel NF-kappa B signaling pathway.
SO The Journal of biological chemistry, (2001 Jun 1) Vol. 276, No. 22, pp. 19012-9. Electronic Publication: 2001-03-21.
Journal code: 2985121R. ISSN: 0021-9258.
AU Lucas P C; Yonezumi M; Inohara N; McAllister-Lucas L M; Abazeed M E; Chen F F; Yamaoka S; Seto M; Nunez G
AN 2001328391 MEDLINE

L85 ANSWER 10 OF 104 MEDLINE on STN DUPLICATE 7
TI Novel NEMO/IkappaB kinase and NF-kappa B target genes at the pre-B to immature B cell transition.
SO The Journal of biological chemistry, (2001 May 25) Vol. 276, No. 21, pp. 18579-90. Electronic Publication: 2001-02-21.
Journal code: 2985121R. ISSN: 0021-9258.
AU Li J; Peet G W; Balzarano D; Li X; Massa P; Barton R W; Marcu K B
AN 2001316128 MEDLINE

L85 ANSWER 11 OF 104 MEDLINE on STN DUPLICATE 8
TI Inhibition of the nuclear factor kappa B (NF-kappa B) pathway by tetracyclic kaurene diterpenes in macrophages. Specific effects on NF-kappa B-inducing kinase activity and on the coordinate activation of ERK and p38 MAPK.
SO The Journal of biological chemistry, (2001 May 11) Vol. 276, No. 19, pp. 15854-60. Electronic Publication: 2001-02-09.
Journal code: 2985121R. ISSN: 0021-9258.
AU Castrillo A; de Las Heras B; Hortelano S; Rodriguez B; Villar A; Bosca L
AN 2001291007 MEDLINE

L85 ANSWER 12 OF 104 MEDLINE on STN DUPLICATE 9
TI Effects of the NIK aly mutation on NF-kappaB activation by the Epstein-Barr virus latent infection membrane protein, lymphotoxin beta receptor, and CD40.
SO The Journal of biological chemistry, (2001 May 4) Vol. 276, No. 18, pp. 14602-6. Electronic Publication: 2001-03-14.
Journal code: 2985121R. ISSN: 0021-9258.
AU Luftig M A; Cahir-McFarland E; Mosialos G; Kieff E
AN 2001370772 MEDLINE

L85 ANSWER 13 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Tumor suppressor MMAC/PTEN inhibits cytokine-induced NFκB activation without interfering with the IκB degradation pathway
SO Journal of Biological Chemistry (2001), 276(14), 11402-11408
CODEN: JBCHA3; ISSN: 0021-9258
AU Koul, Dimpy; Yao, Yixin; Abbruzzese, James L.; Yung, W. K. Alfred; Reddy, Shrikanth A. G.
AN 2001:395052 HCAPLUS
DN 135:150793

L85 ANSWER 14 OF 104 MEDLINE on STN DUPLICATE 10
TI Activation of NF-kappa B by nontypeable Hemophilus influenzae is mediated by toll-like receptor 2-TAK1-dependent NIK-IKK alpha /beta-I kappa B alpha and MKK3/6-p38 MAP kinase signaling pathways in epithelial cells.
SO Proceedings of the National Academy of Sciences of the United States of America, (2001 Jul 17) Vol. 98, No. 15, pp. 8774-9. Electronic

Publication: 2001-07-03.
Journal code: 7505876. ISSN: 0027-8424.
AU Shuto T; Xu H; Wang B; Han J; Kai H; Gu X X; Murphy T F; Lim D J; Li J D
AN 2001419650 MEDLINE

L85 ANSWER 15 OF 104 MEDLINE on STN DUPLICATE 11
TI Activation of nuclear factor kappaB through the IKK complex by the topoisomerase poisons SN38 and doxorubicin: a brake to apoptosis in HeLa human carcinoma cells.
SO Cancer research, (2001 Nov 1) Vol. 61, No. 21, pp. 7785-91.
Journal code: 2984705R. ISSN: 0008-5472.
AU Bottero V; Busuttil V; Loubat A; Magne N; Fischel J L; Milano G; Peyron J F
AN 2001648412 MEDLINE

L85 ANSWER 16 OF 104 MEDLINE on STN DUPLICATE 12
TI Role of IKKgamma/nemo in assembly of the Ikappa B kinase complex.
SO The Journal of biological chemistry, (2001 Feb 9) Vol. 276, No. 6, pp. 4494-500. Electronic Publication: 2000-11-15.
Journal code: 2985121R. ISSN: 0021-9258.
AU Li X H; Fang X; Gaynor R B
AN 2001268720 MEDLINE

L85 ANSWER 17 OF 104 MEDLINE on STN DUPLICATE 13
TI vCLAP, a caspase-recruitment domain-containing protein of equine Herpesvirus-2, persistently activates the Ikappa B kinases through oligomerization of IKKgamma.
SO The Journal of biological chemistry, (2001 Feb 2) Vol. 276, No. 5, pp. 3183-7. Electronic Publication: 2000-12-11.
Journal code: 2985121R. ISSN: 0021-9258.
AU Poyet J L; Srinivasula S M; Alnemri E S
AN 2001269967 MEDLINE

L85 ANSWER 18 OF 104 MEDLINE on STN DUPLICATE 14
TI Activation of the I kappa B alpha kinase (IKK) complex by double-stranded RNA-binding defective and catalytic inactive mutants of the interferon-inducible protein kinase PKR.
SO Oncogene, (2001 Apr 5) Vol. 20, No. 15, pp. 1900-12.
Journal code: 8711562. ISSN: 0950-9232.
AU Ishii T; Kwon H; Hiscott J; Mosialos G; Koromilas A E
AN 2001237349 MEDLINE

L85 ANSWER 19 OF 104 MEDLINE on STN DUPLICATE 15
TI Mutations in the Drosophila dTAK1 gene reveal a conserved function for MAPKKKs in the control of rel/NF-kappaB-dependent innate immune responses.
SO Genes & development, (2001 Aug 1) Vol. 15, No. 15, pp. 1900-12.
Journal code: 8711660. ISSN: 0890-9369.
AU Vidal S; Khush R S; Leulier F; Tzou P; Nakamura M; Lemaitre B
AN 2001440010 MEDLINE

L85 ANSWER 20 OF 104 MEDLINE on STN DUPLICATE 16
TI Conjugated polyhydroxybenzene derivatives block tumor necrosis factor-alpha-mediated nuclear factor-kappaB activation and cyclooxygenase-2 gene transcription by targeting IkappaB kinase activity.
SO Molecular pharmacology, (2001 Dec) Vol. 60, No. 6, pp. 1439-48.
Journal code: 0035623. ISSN: 0026-895X.
AU Chen C C; Chiu K T; Chan S T; Chern J W
AN 2001677285 MEDLINE

L85 ANSWER 21 OF 104 MEDLINE on STN DUPLICATE 17
TI Induction of monocyte chemoattractant protein 1 by Helicobacter pylori involves NF-kappaB.
SO Infection and immunity, (2001 Mar) Vol. 69, No. 3, pp. 1280-6.
Journal code: 0246127. ISSN: 0019-9567.
AU Mori N; Ueda A; Geleziunas R; Wada A; Hirayama T; Yoshimura T; Yamamoto N

AN 2001285342 MEDLINE

L85 ANSWER 22 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI NIK-associated protein (NAP), a negative regulator of TNF signaling.
SO FASEB Journal, (March 8, 2001) Vol. 15, No. 5, pp. A1040. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology 2001. Orlando, Florida, USA. March 31-April 04, 2001.
CODEN: FAJOEC. ISSN: 0892-6638.
AU Hu, Wen-Hui [Reprint author]; Walters, Winston [Reprint author]; White, Michael [Reprint author]; Dietrich, W. Dalton [Reprint author]; Bethea, John R. [Reprint author]
AN 2001:257979 BIOSIS

L85 ANSWER 23 OF 104 MEDLINE on STN DUPLICATE 18
TI Modulation of gene expression by (-)-epigallocatechin gallate in PC-9 cells using a cDNA expression array.
SO Biological & pharmaceutical bulletin, (2001 Aug) Vol. 24, No. 8, pp. 883-6.
Journal code: 9311984. ISSN: 0918-6158.
AU Okabe S; Fujimoto N; Sueoka N; Suganuma M; Fujiki H
AN 2001466101 MEDLINE

L85 ANSWER 24 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI CD40 signaling in B cells regulates the expression of pim-1 via the NF-kappaB pathway.
SO FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A703. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology 2001. Orlando, Florida, USA. March 31-April 04, 2001.
CODEN: FAJOEC. ISSN: 0892-6638.
AU Zhu, Mindy [Reprint author]; Ramirez, Luis; Lee, Rosaline [Reprint author]; Pelech, Steve; Bishop, Gail; Gold, Michael [Reprint author]
AN 2001:276736 BIOSIS

L85 ANSWER 25 OF 104 MEDLINE on STN DUPLICATE 19
TI Activation of NF-kappaB by hepatitis B virus X protein through an IkappaB kinase-independent mechanism.
SO American journal of physiology. Gastrointestinal and liver physiology, (2001 Apr) Vol. 280, No. 4, pp. G669-77.
Journal code: 100901227. ISSN: 0193-1857.
AU Purcell N H; Yu C; He D; Xiang J; Paran N; DiDonato J A; Yamaoka S; Shaul Y; Lin A
AN 2001216984 MEDLINE

L85 ANSWER 26 OF 104 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V. on STN DUPLICATE
AN 2001120976 ESBIOBASE
TI Activation of NF-κB by hepatitis B virus X protein through an IκB kinase-independent mechanism
AU Purcell N.H.; Yu C.; He D.; Xiang J.; Paran N.; DiDonato J.A.; Yamaoka S.; Shaul Y.; Lin A.
CS A. Lin, Ben May Inst. for Cancer Research, University of Chicago, MC 6027, 5841 S. Maryland, Chicago, IL 60637, United States.
E-mail: alin@huggins.bsd.uchicago.edu
SO American Journal of Physiology - Gastrointestinal and Liver Physiology, (2001), 280/4 43-4 (G669-G677), 74 reference(s)
CODEN: APGPDF ISSN: 0193-1857
DT Journal; Article
CY United States
LA English
SL English

L85 ANSWER 27 OF 104 MEDLINE on STN DUPLICATE 21
TI S phase dependence and involvement of NF-kappaB activating kinase to NF-kappaB activation by camptothecin.
SO Biochemical pharmacology, (2001 Sep 1) Vol. 62, No. 5, pp. 603-16. Journal code: 0101032. ISSN: 0006-2952.
AU Habraken Y; Piret B; Piette J
AN 2001537538 MEDLINE

L85 ANSWER 28 OF 104 MEDLINE on STN DUPLICATE 22
TI The green tea polyphenol (-)-epigallocatechin-3-gallate blocks nuclear factor-kappa B activation by inhibiting I kappa B kinase activity in the intestinal epithelial cell line IEC-6.
SO Molecular pharmacology, (2001 Sep) Vol. 60, No. 3, pp. 528-33. Journal code: 0035623. ISSN: 0026-895X.
AU Yang F; Oz H S; Barve S; de Villiers W J; McClain C J; Varilek G W
AN 2001457157 MEDLINE

L85 ANSWER 29 OF 104 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 23
TI Activation of I kappa B kinase and its effect in the course of NF-kappa B activation
SO PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS, (AUG 2001) Vol. 28, No. 4, pp. 455-458.
ISSN: 1000-3282.
AU Wang Y (Reprint); Huang W H
AN 2001:730345 SCISEARCH

L85 ANSWER 30 OF 104 MEDLINE on STN DUPLICATE 24
TI GPx-1 gene delivery modulates NFkappaB activation following diverse environmental injuries through a specific subunit of the IKK complex.
SO Antioxidants & redox signaling, (2001 Jun) Vol. 3, No. 3, pp. 415-32. Journal code: 100888899. ISSN: 1523-0864.
AU Li Q; Sanlioglu S; Li S; Ritchie T; Oberley L; Engelhardt J F
AN 2001444800 MEDLINE

L85 ANSWER 31 OF 104 MEDLINE on STN DUPLICATE 25
TI 2-acetylaminofluorene up-regulates rat mdr1b expression through generating reactive oxygen species that activate NF-kappa B pathway.
SO The Journal of biological chemistry, (2001 Jan 5) Vol. 276, No. 1, pp. 413-20.
Journal code: 2985121R. ISSN: 0021-9258.
AU Deng L; Lin-Lee Y C; Claret F X; Kuo M T
AN 2001112672 MEDLINE

L85 ANSWER 32 OF 104 MEDLINE on STN DUPLICATE 26
TI The catalytic activity of dsRNA-dependent protein kinase, PKR, is required for NF-kappaB activation.
SO Oncogene, (2001 Jan 18) Vol. 20, No. 3, pp. 385-94. Journal code: 8711562. ISSN: 0950-9232.
AU Gil J; Rullas J; Garcia M A; Alcami J; Esteban M
AN 2001256801 MEDLINE

L85 ANSWER 33 OF 104 MEDLINE on STN DUPLICATE 27
TI TAK1 is a ubiquitin-dependent kinase of MKK and IKK.
SO Nature, (2001 Jul 19) Vol. 412, No. 6844, pp. 346-51. Journal code: 0410462. ISSN: 0028-0836.
AU Wang C; Deng L; Hong M; Akkaraju G R; Inoue J; Chen Z J
AN 2001411919 MEDLINE

L85 ANSWER 34 OF 104 MEDLINE on STN DUPLICATE 28
TI 5-Fluorouracil suppression of NF-KappaB is mediated by the inhibition of IKappab kinase activity in human salivary gland cancer cells.
SO Biochemical and biophysical research communications, (2001 Mar 23) Vol. 282, No. 1, pp. 292-6.

Journal code: 0372516. ISSN: 0006-291X.
AU Azuma M; Yamashita T; Aota K; Tamatani T; Sato M
AN 2001189722 MEDLINE

L85 ANSWER 35 OF 104 MEDLINE on STN DUPLICATE 29
TI Functional activities of the human T-cell leukemia virus type I Tax oncoprotein: cellular signaling through NF-kappa B.
SO Cytokine & growth factor reviews, (2001 Jun-Sep) Vol. 12, No. 2-3, pp. 207-17. Ref: 156
Journal code: 9612306. ISSN: 1359-6101.
AU Jeang K T
AN 2001473997 MEDLINE

L85 ANSWER 36 OF 104 MEDLINE on STN DUPLICATE 30
TI Characterization of aging-associated up-regulation of constitutive nuclear factor-kappa B binding activity.
SO Antioxidants & redox signaling, (2001 Feb) Vol. 3, No. 1, pp. 147-56.
Journal code: 100888899. ISSN: 1523-0864.
AU Helenius M; Kyrylenko S; Vehvilainen P; Salminen A
AN 2001459769 MEDLINE

L85 ANSWER 37 OF 104 MEDLINE on STN DUPLICATE 31
TI CSN3 interacts with IKKgamma and inhibits TNF- but not IL-1-induced NF-kappaB activation.
SO FEBS letters, (2001 Jun 15) Vol. 499, No. 1-2, pp. 133-6.
Journal code: 0155157. ISSN: 0014-5793.
AU Hong X; Xu L; Li X; Zhai Z; Shu H
AN 2001357636 MEDLINE

L85 ANSWER 38 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI The cytotoxic action of arsenite in vitro and in vivo is dependent on inhibition of NF-kappaB.
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 101a. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology, Part 1. Orlando, Florida, USA. December 07-11, 2001. American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
AU Mathas, Stephan [Reprint author]; Lietz, Andreas [Reprint author]; Janz, Martin [Reprint author]; Jundt, Franziska [Reprint author]; Bommert, Kurt [Reprint author]; Doerken, Bernd [Reprint author]
AN 2002:129857 BIOSIS

L85 ANSWER 39 OF 104 MEDLINE on STN DUPLICATE 32
TI Roles of Akt/PKB and IKK complex in constitutive induction of NF-kappaB in hepatocellular carcinomas of transforming growth factor alpha/c-myc transgenic mice.
SO Hepatology (Baltimore, Md.), (2001 Jul) Vol. 34, No. 1, pp. 32-41.
Journal code: 8302946. ISSN: 0270-9139.
AU Factor V; Oliver A L; Panta G R; Thorgeirsson S S; Sonenshein G E; Arsura M
AN 2001374658 MEDLINE

L85 ANSWER 40 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI Activation of IkappaB kinase and NF-kappaB by proinflammatory cytokines.
SO FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A1. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology 2001. Orlando, Florida, USA. March 31-April 04, 2001.
CODEN: FAJOEC. ISSN: 0892-6638.
AU Delhase, Mireille [Reprint author]; Rothwarf, David M. [Reprint author]; Karin, Michael [Reprint author]
AN 2001:244948 BIOSIS

L85 ANSWER 41 OF 104 EMBASE
TI Activation of NF-κB by hepatitis B virus X protein through an IκB kinase-independent mechanism.
SO American Journal of Physiology - Gastrointestinal and Liver Physiology, (Apr 2001) Vol. 280, No. 4 43-4, pp. G669-G677.
Refs: 74
ISSN: 0193-1857 CODEN: APGPDF
AU Purcell N.H.; Yu C.; He D.; Xiang J.; Paran N.; Didonato J.A.; Yamaoka S.; Shaul Y.; Lin A.
AN 2001188601 EMBASE

L85 ANSWER 42 OF 104 MEDLINE on STN DUPLICATE 33
TI CARD9 is a novel caspase recruitment domain-containing protein that interacts with BCL10/CLAP and activates NF-kappa B.
SO The Journal of biological chemistry, (2000 Dec 29) Vol. 275, No. 52, pp. 41082-6.
Journal code: 2985121R. ISSN: 0021-9258.
AU Bertin J; Guo Y; Wang L; Srinivasula S M; Jacobson M D; Poyet J L; Merriam S; Du M Q; Dyer M J; Robison K E; DiStefano P S; Alnemri E S
AN 2001103290 MEDLINE

L85 ANSWER 43 OF 104 MEDLINE on STN DUPLICATE 34
TI Activation of the Ikappa B kinases by RIP via IKKgamma /NEMO-mediated oligomerization.
SO The Journal of biological chemistry, (2000 Dec 1) Vol. 275, No. 48, pp. 37966-77.
Journal code: 2985121R. ISSN: 0021-9258.
AU Poyet J L; Srinivasula S M; Lin J H; Fernandes-Alnemri T; Yamaoka S; Tsichlis P N; Alnemri E S
AN 2001078318 MEDLINE

L85 ANSWER 44 OF 104 MEDLINE on STN DUPLICATE 35
TI Inhibition of NF-kappa B activation by arsenite through reaction with a critical cysteine in the activation loop of Ikappa B kinase.
SO The Journal of biological chemistry, (2000 Nov 17) Vol. 275, No. 46, pp. 36062-6.
Journal code: 2985121R. ISSN: 0021-9258.
AU Kapahi P; Takahashi T; Natoli G; Adams S R; Chen Y; Tsien R Y; Karin M
AN 2001074348 MEDLINE

L85 ANSWER 45 OF 104 MEDLINE on STN DUPLICATE 36
TI The I kappa B kinase (IKK) complex is tripartite and contains IKK gamma but not IKAP as a regular component.
SO The Journal of biological chemistry, (2000 Sep 22) Vol. 275, No. 38, pp. 29779-87.
Journal code: 2985121R. ISSN: 0021-9258.
AU Krappmann D; Hatada E N; Tegethoff S; Li J; Klippel A; Giese K; Baeuerle P A; Scheidereit C
AN 2001021396 MEDLINE

L85 ANSWER 46 OF 104 MEDLINE on STN DUPLICATE 37
TI An induced proximity model for NF-kappa B activation in the Nod1/RICK and RIP signaling pathways.
SO The Journal of biological chemistry, (2000 Sep 8) Vol. 275, No. 36, pp. 27823-31.
Journal code: 2985121R. ISSN: 0021-9258.
AU Inohara N; Koseki T; Lin J; del Peso L; Lucas P C; Chen F F; Ogura Y; Nunez G
AN 2000496005 MEDLINE

L85 ANSWER 47 OF 104 MEDLINE on STN DUPLICATE 38
TI Characterization of the recombinant IKK1/IKK2 heterodimer. Mechanisms regulating kinase activity.
SO The Journal of biological chemistry, (2000 Aug 25) Vol. 275, No. 34, pp.

25883-91.
Journal code: 2985121R. ISSN: 0021-9258.
AU Huynh Q K; Boddupalli H; Rouw S A; Koboldt C M; Hall T; Sommers C; Hauser S D; Pierce J L; Combs R G; Reitz B A; Diaz-Collier J A; Weinberg R A; Hood B L; Kilpatrick B F; Tripp C S
AN 2000458530 MEDLINE

L85 ANSWER 48 OF 104 MEDLINE on STN DUPLICATE 39
TI Inhibition of IkappaB kinase activity by sodium salicylate in vitro does not reflect its inhibitory mechanism in intact cells.
SO The Journal of biological chemistry, (2000 Apr 14) Vol. 275, No. 15, pp. 10925-9.
Journal code: 2985121R. ISSN: 0021-9258.
AU Alpert D; Vilcek J
AN 2000219131 MEDLINE

L85 ANSWER 49 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI CIKS, a connection to IκB kinase and stress-activated protein kinase
SO Proceedings of the National Academy of Sciences of the United States of America (2000), 97(19), 10494-10499
CODEN: PNASA6; ISSN: 0027-8424
AU Leonardi, Antonio; Chariot, Alain; Claudio, Estefania; Cunningham, Kirk; Siebenlist, Ulrich
AN 2000:664841 HCAPLUS
DN 134:142668

L85 ANSWER 50 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Regulation of the NF-κB activation pathway by isolated domains of FIP3/IKKγ, a component of the IκB-α kinase complex
SO Journal of Biological Chemistry (2000), 275(13), 9882-9889
CODEN: JBCHA3; ISSN: 0021-9258
AU Ye, Jianjiang; Xie, Xueping; Tarassishin, Leonid; Horwitz, Marshall S.
AN 2000:234942 HCAPLUS
DN 133:42023

L85 ANSWER 51 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI NF-κB signaling promotes both cell survival and neurite process formation in nerve growth factor-stimulated PC12 cells
SO Journal of Neuroscience (2000), 20(20), 7556-7563
CODEN: JNRSDS; ISSN: 0270-6474
AU Foehr, Erik D.; Lin, Xin; O'Mahony, Alison; Geleziunas, Romas; Bradshaw, Ralph A.; Greene, Warner C.
AN 2000:763118 HCAPLUS
DN 133:345139

L85 ANSWER 52 OF 104 MEDLINE on STN DUPLICATE 40
TI The physical association of protein kinase C theta with a lipid raft-associated inhibitor of kappa B factor kinase (IKK) complex plays a role in the activation of the NF-kappa B cascade by TCR and CD28.
SO Journal of immunology (Baltimore, Md. : 1950), (2000 Dec 15) Vol. 165, No. 12, pp. 6933-40.
Journal code: 2985117R. ISSN: 0022-1767.
AU Khoshnan A; Bae D; Tindell C A; Nel A E
AN 2001091134 MEDLINE

L85 ANSWER 53 OF 104 MEDLINE on STN DUPLICATE 41
TI Raf induces NF-kappaB by membrane shuttle kinase MEKK1, a signaling pathway critical for transformation.
SO Proceedings of the National Academy of Sciences of the United States of America, (2000 Apr 25) Vol. 97, No. 9, pp. 4615-20.
Journal code: 7505876. ISSN: 0027-8424.
AU Baumann B; Weber C K; Troppmair J; Whiteside S; Israel A; Rapp U R; Wirth T
AN 2000243744 MEDLINE

L85 ANSWER 54 OF 104 MEDLINE on STN DUPLICATE 42
TI PKR stimulates NF-kappaB irrespective of its kinase function by interacting with the IkappaB kinase complex.
SO Molecular and cellular biology, (2000 Jul) Vol. 20, No. 13, pp. 4532-42. Journal code: 8109087. ISSN: 0270-7306.
AU Bonnet M C; Weil R; Dam E; Hovanessian A G; Meurs E F
AN 2000307858 MEDLINE

L85 ANSWER 55 OF 104 MEDLINE on STN DUPLICATE 43
TI Mapping of atypical protein kinase C within the nerve growth factor signaling cascade: relationship to differentiation and survival of PC12 cells.
SO Molecular and cellular biology, (2000 Jul) Vol. 20, No. 13, pp. 4494-504. Journal code: 8109087. ISSN: 0270-7306.
AU Wooten M W; Seibenhener M L; Neidigh K B; Vandenplas M L
AN 2000307854 MEDLINE

L85 ANSWER 56 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Mixed-lineage kinase 3 delivers CD3/CD28-derived signals into the IκB kinase complex
SO Molecular and Cellular Biology (2000), 20(7), 2556-2568 CODEN: MCEBD4; ISSN: 0270-7306
AU Hehner, Steffen P.; Hofmann, Thomas G.; Ushmorov, Alexej; Dienz, Oliver; Leung, Irene Wing-Lan; Lassam, Norman; Scheidereit, Claus; Droge, Wulf; Schmitz, M. Lienhard
AN 2000:193394 HCAPLUS
DN 133:54457

L85 ANSWER 57 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 44
TI A dominant negative form of IKK2 prevents suppression of apoptosis by the peroxisome proliferator nafenopin
SO Carcinogenesis, (20000900) vol. 21, no. 9, pp. 1757-1760. ISSN: 0143-3334.
AU Cosulich, S.C.; James, N.H.; Needham, M.R.C.; Newham, P.P.; Bundell, K.R.; Roberts, R.A.
AN 2000:115994 LIFESCI

L85 ANSWER 58 OF 104 MEDLINE on STN DUPLICATE 45
TI A novel X-linked disorder of immune deficiency and hypohidrotic ectodermal dysplasia is allelic to incontinentia pigmenti and due to mutations in IKK-gamma (NEMO).
SO American journal of human genetics, (2000 Dec) Vol. 67, No. 6, pp. 1555-62. Electronic Publication: 2000-10-24. Journal code: 0370475. ISSN: 0002-9297.
AU Zonana J; Elder M E; Schneider L C; Orlow S J; Moss C; Golabi M; Shapira S K; Farndon P A; Wara D W; Emmal S A; Ferguson B M
AN 2001086127 MEDLINE

L85 ANSWER 59 OF 104 MEDLINE on STN DUPLICATE 46
TI Selective inhibition of NF-kappaB activation by a peptide that blocks the interaction of NEMO with the IkappaB kinase complex.
SO Science (New York, N.Y.), (2000 Sep 1) Vol. 289, No. 5484, pp. 1550-4. Journal code: 0404511. ISSN: 0036-8075.
AU May M J; D'Acquisto F; Madge L A; Glockner J; Pober J S; Ghosh S
AN 2000431571 MEDLINE

L85 ANSWER 60 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI IκB kinase (IKK) complex
SO Tanpakushitsu Kakusan Koso (2000), 45(9, 6gatsugozoka), 1546-1550 CODEN: TAKKAJ; ISSN: 0039-9450
AU Fujita, Takashi; Suhara, Wakako
AN 2000:375269 HCAPLUS
DN 133:1796

L85 ANSWER 61 OF 104 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 47
TI Somatic mutagenesis studies of NF-kappa B signaling in human T cells: evidence for an essential role of IKK gamma in NF-kappa B activation by T-cell costimulatory signals and HTLV-I Tax protein
SO ONCOGENE, (9 MAR 2000) Vol. 19, No. 11, pp. 1448-1456.
ISSN: 0950-9232.
AU Harhaj E W; Good L; Xiao G T; Uhlik M; Cvijic M E; Rivera-Walsh I; Sun S C (Reprint)
AN 2000:230136 SCISEARCH

L85 ANSWER 62 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 48
TI Activation of NF- Kappa B by the dsRNA-dependent protein kinase, PKR involves the I Kappa B kinase complex.
SO Oncogene, (20000309) vol. 19, no. 11, pp. 1369-1378.
ISSN: 0950-9232.
AU Gil, J.; Alcami, J.; Esteban, M.*
AN 2000:68117 LIFESCI

L85 ANSWER 63 OF 104 MEDLINE on STN DUPLICATE 49
TI Activation of the heterodimeric IkappaB kinase alpha (IKKalpha)-IKKbeta complex is directional: IKKalpha regulates IKKbeta under both basal and stimulated conditions.
SO Molecular and cellular biology, (2000 Feb) Vol. 20, No. 4, pp. 1170-8.
Journal code: 8109087. ISSN: 0270-7306.
AU O'Mahony A; Lin X; Geleziunas R; Greene W C
AN 2000115862 MEDLINE

L85 ANSWER 64 OF 104 MEDLINE on STN DUPLICATE 50
TI NAK is an IkappaB kinase-activating kinase.
SO Nature, (2000 Apr 13) Vol. 404, No. 6779, pp. 778-82.
Journal code: 0410462. ISSN: 0028-0836.
AU Tojima Y; Fujimoto A; Delhase M; Chen Y; Hatakeyama S; Nakayama K; Kaneko Y; Nimura Y; Motoyama N; Ikeda K; Karin M; Nakanishi M
AN 2000244479 MEDLINE

L85 ANSWER 65 OF 104 MEDLINE on STN DUPLICATE 51
TI Protein kinase C-alpha is an upstream activator of the IkappaB kinase complex in the TPA signal transduction pathway to NF-kappaB in U2OS cells.
SO Cellular signalling, (2000 Dec) Vol. 12, No. 11-12, pp. 759-68.
Journal code: 8904683. ISSN: 0898-6568.
AU Vertegaal A C; Kuiperij H B; Yamaoka S; Courtois G; van der Eb A J; Zantema A
AN 2001108892 MEDLINE

L85 ANSWER 66 OF 104 MEDLINE on STN DUPLICATE 52
TI IKKepsilon is part of a novel PMA-inducible IkappaB kinase complex.
SO Molecular cell, (2000 Mar) Vol. 5, No. 3, pp. 513-22.
Journal code: 9802571. ISSN: 1097-2765.
AU Peters R T; Liao S M; Maniatis T
AN 2000337984 MEDLINE

L85 ANSWER 67 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN
TI Kinase regulation in inflammatory response (Reply)
SO Nature, (20000727) vol. 406, no. 6794, p. 368.
ISSN: 0028-0836.
AU Ozes, O.N.; Mayo, L.D.; Gustin, J.A.; Pfeffer, S.R.; Pfeffer, L.M.; Donner, D.B.
AN 2000:90645 LIFESCI

L85 ANSWER 68 OF 104 MEDLINE on STN DUPLICATE 53
TI Activation of the IkappaB kinase complex by TRAF6 requires a dimeric ubiquitin-conjugating enzyme complex and a unique polyubiquitin chain.
SO Cell, (2000 Oct 13) Vol. 103, No. 2, pp. 351-61.

Journal code: 0413066. ISSN: 0092-8674.
AU Deng L; Wang C; Spencer E; Yang L; Braun A; You J; Slaughter C; Pickart C; Chen Z J
AN 2000506244 MEDLINE

L85 ANSWER 69 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN
TI Role of Drosophila IKK gamma in a toll-independent antibacterial immune response
SO Nature Immunology [Nat. Immunol.], (20001000) vol. 1, no. 4, pp. 342-347. ISSN: 1529-2908.
AU Rutschmann, S.; Jung, A.C.; Zhou, R.; Silverman, N.; Hoffmann, J.A.; Ferrandon, D.
AN 2001:6544 LIFESCI

L85 ANSWER 70 OF 104 MEDLINE on STN DUPLICATE 54
TI The IKK complex: an integrator of all signals that activate NF-kappaB?.
SO Trends in cell biology, (2000 Apr) Vol. 10, No. 4, pp. 129-33. Ref: 44
Journal code: 9200566. ISSN: 0962-8924.
AU Israel A
AN 2000207155 MEDLINE

L85 ANSWER 71 OF 104 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI PKC epsilon enhances NF-Kappa B activation via modulation of the IKK complex in cardiac myocytes
SO CIRCULATION, (31 OCT 2000) Vol. 102, No. 18, Supp. [S], pp. 120-120. MA 576.
ISSN: 0009-7322.
AU Li R C X (Reprint); Zhang J; Zheng Y T; Wead W B; Gao J M; Cao X N; Bolli R; Ping P P
AN 2001:53776 SCISEARCH

L85 ANSWER 72 OF 104 MEDLINE on STN DUPLICATE 55
TI Anti-inflammatory cyclopentenone prostaglandins are direct inhibitors of IkappaB kinase.
SO Nature, (2000 Jan 6) Vol. 403, No. 6765, pp. 103-8.
Journal code: 0410462. ISSN: 0028-0836.
AU Rossi A; Kapahi P; Natoli G; Takahashi T; Chen Y; Karin M; Santoro M G
AN 2000102300 MEDLINE

L85 ANSWER 73 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN
TI The I Kappa B kinase (IKK) and NF- Kappa B: key elements of proinflammatory signalling
SO Seminars in Immunology [Semin. Immunol.], (20000200) vol. 12, no. 1, pp. 85-98.
ISSN: 1044-5323.
AU Karin, M.; Delhase, M.
AN 2000:64270 LIFESCI

L85 ANSWER 74 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI NF-kappaB and the innate immune response.
SO Current Opinion in Immunology, (Feb., 2000) Vol. 12, No. 1, pp. 52-58. print.
CODEN: COPIEL. ISSN: 0952-7915.
AU Hatada, Eunice N.; Krappmann, Daniel; Scheidereit, Claus [Reprint author]
AN 2000:137610 BIOSIS

L85 ANSWER 75 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI PKC epsilon enhances NF-kappa B activation via modulation of the IKK complex in cardiac myocytes.
SO Circulation, (October 31, 2000) Vol. 102, No. 18 Supplement, pp. II.120. print.

Meeting Info.: Abstracts from American Heart Association Scientific Sessions 2000. New Orleans, Louisiana, USA. November 12-15, 2000. American Heart Association.
CODEN: CIRCAZ. ISSN: 0009-7322.

AU Li, Richard C. X. [Reprint author]; Zhang, Jun [Reprint author]; Zheng, Yu-Ting [Reprint author]; Wead, William B. [Reprint author]; Gao, Jiuming [Reprint author]; Cao, Xinan [Reprint author]; Bolli, Roberto [Reprint author]; Ping, Peipei [Reprint author]

AN 2001:112217 BIOSIS

L85 ANSWER 76 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 56

TI NF-κB activation inhibitors, methods for screening the inhibitors using the function of TGF-β activated kinase 1 as parameter, and therapeutical use of the inhibitors for autoimmune diseases and inflammation

SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2

IN Sugita, Takahisa; Sakurai, Hiroaki; Kageyama, Noriko; Hasegawa, Ko

AN 1999:511259 HCAPLUS

DN 131:141477

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9940202	A1	19990812	WO 1999-JP422	19990202

W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	AU 9920764	A	19990823	AU 1999-20764	19990202
	JP 2000197500	A	20000718	JP 1999-26803	19990204

L85 ANSWER 77 OF 104 MEDLINE on STN DUPLICATE 57

TI Aminosalicylic acid inhibits IkappaB kinase alpha phosphorylation of IkappaBalpha in mouse intestinal epithelial cells.

SO The Journal of biological chemistry, (1999 Dec 17) Vol. 274, No. 51, pp. 36631-6.
Journal code: 2985121R. ISSN: 0021-9258.

AU Yan F; Polk D B

AN 2000062888 MEDLINE

L85 ANSWER 78 OF 104 MEDLINE on STN DUPLICATE 58

TI Protein kinase C and calcineurin synergize to activate IkappaB kinase and NF-kappaB in T lymphocytes.

SO The Journal of biological chemistry, (1999 Aug 13) Vol. 274, No. 33, pp. 22923-31.
Journal code: 2985121R. ISSN: 0021-9258.

AU Trushin S A; Pennington K N; Algeciras-Schimnich A; Paya C V

AN 1999367411 MEDLINE

L85 ANSWER 79 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 59

TI Role of Adapter Function in Oncoprotein-mediated Activation of NF- Kappa B: Human T-cell leukemia virus type I Tax interacts directly with I Kappa B kinase gamma

SO Journal of Biological Chemistry [J. Biol. Chem.], (19990618) vol. 274, no. 25, pp. 17402-17405.
ISSN: 0021-9258.

AU Jin, D.; Giordano, V.; Kibler, K.V.; Nakano, H.; Jeang, K.

AN 1999:80820 LIFESCI

L85 ANSWER 80 OF 104 MEDLINE on STN DUPLICATE 60

TI Nuclear IkappaBbeta maintains persistent NF-kappaB activation in HIV-1-infected myeloid cells.

SO The Journal of biological chemistry, (1999 May 7) Vol. 274, No. 19, pp.

13010-6.
Journal code: 2985121R. ISSN: 0021-9258.
AU DeLuca C; Petropoulos L; Zmeureanu D; Hiscott J
AN 1999240678 MEDLINE

L85 ANSWER 81 OF 104 MEDLINE on STN DUPLICATE 61
TI How NF-kappaB is activated: the role of the IkappaB kinase (IKK) complex.
SO Oncogene, (1999 Nov 22) Vol. 18, No. 49, pp. 6867-74. Ref: 72
Journal code: 8711562. ISSN: 0950-9232.
AU Karin M
AN 2000070127 MEDLINE

L85 ANSWER 82 OF 104 MEDLINE on STN DUPLICATE 62
TI NF-kappaB activation by a signaling complex containing TRAF2, TANK and TBK1, a novel IKK-related kinase.
SO The EMBO journal, (1999 Dec 1) Vol. 18, No. 23, pp. 6694-704.
Journal code: 8208664. ISSN: 0261-4189.
AU Pomerantz J L; Baltimore D
AN 2000050564 MEDLINE

L85 ANSWER 83 OF 104 MEDLINE on STN DUPLICATE 63
TI Inhibition of cyclo-oxygenase 2 expression in colon cells by the chemopreventive agent curcumin involves inhibition of NF-kappaB activation via the NIK/IKK signalling complex.
SO Oncogene, (1999 Oct 28) Vol. 18, No. 44, pp. 6013-20.
Journal code: 8711562. ISSN: 0950-9232.
AU Plummer S M; Holloway K A; Manson M M; Munks R J; Kaptein A; Farrow S; Howells L
AN 2000027389 MEDLINE

L85 ANSWER 84 OF 104 MEDLINE on STN DUPLICATE 64
TI Primary human CD4+ T cells contain heterogeneous I kappa B kinase complexes: role in activation of the IL-2 promoter.
SO Journal of immunology (Baltimore, Md. : 1950), (1999 Nov 15) Vol. 163, No. 10, pp. 5444-52.
Journal code: 2985117R. ISSN: 0022-1767.
AU Khoshnan A; Kempiak S J; Bennett B L; Bae D; Xu W; Manning A M; June C H; Nel A E
AN 2000021841 MEDLINE

L85 ANSWER 85 OF 104 MEDLINE on STN DUPLICATE 65
TI NF-kappaB p105 is a target of IkappaB kinases and controls signal induction of Bcl-3-p50 complexes.
SO The EMBO journal, (1999 Sep 1) Vol. 18, No. 17, pp. 4766-78.
Journal code: 8208664. ISSN: 0261-4189.
AU Heissmeyer V; Krappmann D; Wulczyn F G; Scheidereit C
AN 1999400621 MEDLINE

L85 ANSWER 86 OF 104 MEDLINE on STN DUPLICATE 66
TI IkappaB kinase complex is an intracellular target for endotoxic lipopolysaccharide in human monocytic cells.
SO Blood, (1999 Sep 1) Vol. 94, No. 5, pp. 1711-6.
Journal code: 7603509. ISSN: 0006-4971.
AU Hawiger J; Veach R A; Liu X Y; Timmons S; Ballard D W
AN 1999409043 MEDLINE

L85 ANSWER 87 OF 104 MEDLINE on STN DUPLICATE 67
TI IkappaB kinase (IKK)-associated protein 1, a common component of the heterogeneous IKK complex.
SO Molecular and cellular biology, (1999 Feb) Vol. 19, No. 2, pp. 1526-38.
Journal code: 8109087. ISSN: 0270-7306.
AU Mercurio F; Murray B W; Shevchenko A; Bennett B L; Young D B; Li J W; Pascual G; Motiwala A; Zhu H; Mann M; Manning A M
AN 1999108125 MEDLINE

L85 ANSWER 88 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Positive and negative regulation of IκB kinase activity through
IKKβ subunit phosphorylation
SO Jikken Igaku (1999), 17(11), 1329-1332
CODEN: JIIGEF; ISSN: 0288-5514
AU Hayakawa, Makio
AN 1999:482242 HCAPLUS
DN 131:140892

L85 ANSWER 89 OF 104 MEDLINE on STN DUPLICATE 68
TI Carbachol activates IkappaB kinase in isolated canine gastric parietal
cells.
SO Biochemical and biophysical research communications, (1999 Aug 11) Vol.
261, No. 3, pp. 877-84.
Journal code: 0372516. ISSN: 0006-291X.
AU Todisco A; Ramamoorthy S; Pausawasdi N; Tacey K
AN 1999373172 MEDLINE

L85 ANSWER 90 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI The IκB kinase: a master regulator of NF-κB, innate immunity,
and epidermal differentiation
SO Cold Spring Harbor Symposia on Quantitative Biology (1999), 64(Signaling
and Gene Expression in the Immune System), 491-503
CODEN: CSHSAZ; ISSN: 0091-7451
AU Delhase, M.; Karin, M.
AN 2000:401237 HCAPLUS
DN 134:55159

L85 ANSWER 91 OF 104 MEDLINE on STN DUPLICATE 69
TI Embryonic lethality, liver degeneration, and impaired NF-kappa B
activation in IKK-beta-deficient mice.
SO Immunity, (1999 Apr) Vol. 10, No. 4, pp. 421-9.
Journal code: 9432918. ISSN: 1074-7613.
AU Tanaka M; Fuentes M E; Yamaguchi K; Durnin M H; Dalrymple S A; Hardy K L;
Goeddel D V.
AN 1999244191 MEDLINE

L85 ANSWER 92 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Identification of the gene variations in human IKKA
SO Immunogenetics (1999), 50(5/6), 363-365
CODEN: IMNGBK; ISSN: 0093-7711
AU Hagiwara, K.; Tsuchiya, N.; Takazoe, M.; Yamamoto, K.; Tokunaga, K.
AN 1999:754857 HCAPLUS
DN 134:96035

L85 ANSWER 93 OF 104 MEDLINE on STN DUPLICATE 70
TI All three IkappaB isoforms and most Rel family members are stably
associated with the IkappaB kinase 1/2 complex.
SO European journal of biochemistry / FEBS, (1999 Jan) Vol. 259, No. 1-2, pp.
253-61.
Journal code: 0107600. ISSN: 0014-2956.
AU Heilker R; Freuler F; Pulfer R; Di Padova F; Eder J
AN 1999115448 MEDLINE

L85 ANSWER 94 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 71
TI NF- Kappa B activation by tumour necrosis factor requires the Akt
serine-threonine kinase
SO Nature, (19990902) vol. 401, no. 6748, pp. 82-85.
ISSN: 0028-0836.
AU Ozes, O.N.; Mayo, L.D.; Gustin, J.A.; Pfeffer, S.R.; Pfeffer, L.M.;
Donner, D.B.*
AN 1999:93511 LIFESCI

L85 ANSWER 95 OF 104 MEDLINE on STN DUPLICATE 72

TI Coordinate regulation of IkappaB kinases by mitogen-activated protein kinase kinase kinase 1 and NF-kappaB-inducing kinase.
SO Molecular and cellular biology, (1998 Dec) Vol. 18, No. 12, pp. 7336-43. Journal code: 8109087. ISSN: 0270-7306.
AU Nemoto S; DiDonato J A; Lin A
AN 1999038238 MEDLINE

L85 ANSWER 96 OF 104 MEDLINE on STN DUPLICATE 73
TI Differential regulation of IkappaB kinase alpha and beta by two upstream kinases, NF-kappaB-inducing kinase and mitogen-activated protein kinase/ERK kinase kinase-1.
SO Proceedings of the National Academy of Sciences of the United States of America, (1998 Mar 31) Vol. 95, No. 7, pp. 3537-42. Journal code: 7505876. ISSN: 0027-8424.
AU Nakano H; Shindo M; Sakon S; Nishinaka S; Mihara M; Yagita H; Okumura K
AN 1998188238 MEDLINE

L85 ANSWER 97 OF 104 MEDLINE on STN DUPLICATE 74
TI Direct phosphorylation of IkappaB by IKKalpha and IKKbeta: discrimination between free and NF-kappaB-bound substrate.
SO Science (New York, N.Y.), (1998 Aug 28) Vol. 281, No. 5381, pp. 1360-3. Journal code: 0404511. ISSN: 0036-8075.
AU Zandi E; Chen Y; Karin M
AN 1998387927 MEDLINE

L85 ANSWER 98 OF 104 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 75
TI The IKK signalsome: A multi-protein signaling complex regulating NF-kappa B activation
SO FASEB JOURNAL, (24 APR 1998) Vol. 12, No. 8, Supp. [S], pp. A1302-A1302. MA D3.
ISSN: 0892-6638.
AU Mercurio F
AN 1999:959927 SCISEARCH

L85 ANSWER 99 OF 104 MEDLINE on STN DUPLICATE 76
TI IKK-gamma is an essential regulatory subunit of the IkappaB kinase complex.
SO Nature, (1998 Sep 17) Vol. 395, No. 6699, pp. 297-300. Journal code: 0410462. ISSN: 0028-0836.
AU Rothwarf D M; Zandi E; Natoli G; Karin M
AN 1998421680 MEDLINE

L85 ANSWER 100 OF 104 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI IKK-gamma is an essential regulatory subunit of the IkappaB kinase complex.
SO Nature (London), (Sept. 17, 1998) Vol. 39, No. 6699, pp. 297-300. print. CODEN: NATUAS. ISSN: 0028-0836.
AU Rothwarf, David M.; Zandi, Ebrahim; Natoll, Gioacchino; Karin, Michaelo [Reprint author]
AN 1998:446874 BIOSIS

L85 ANSWER 101 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI IκB kinase-β: NF-κB activation and complex formation with IκB kinase-α and NIK
SO Science (Washington, D. C.) (1997), 278(5339), 866-869
CODEN: SCIEAS; ISSN: 0036-8075
AU Woronicz, John D.; Gao, Xiong; Cao, Zhaodan; Rothe, Mike; Goeddel, David V.
AN 1997:698007 HCAPLUS
DN 128:46315

L85 ANSWER 102 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
TI IKK-1 and IKK-2: cytokine-activated IκB kinases essential for

NF-κB activation
SO Science (Washington, D. C.) (1997), 278(5339), 860-866
CODEN: SCIEAS; ISSN: 0036-8075
AU Mercurio, Frank; Zhu, Hengyi; Murray, Brion W.; Shevchenko, Andrej; Bennett, Brydon L.; Li, Jian wu; Young, David B.; Barbosa, Miguel; Mann, Matthias
AN 1997:697994 HCAPLUS
DN 128:59824

L85 ANSWER 103 OF 104 MEDLINE on STN DUPLICATE 77
TI A cytokine-responsive IkappaB kinase that activates the transcription factor NF-kappaB.
SO Nature, (1997 Aug 7) Vol. 388, No. 6642, pp. 548-54.
Journal code: 0410462. ISSN: 0028-0836.
AU DiDonato J A; Hayakawa M; Rothwarf D M; Zandi E; Karin M
AN 97394468 MEDLINE

L85 ANSWER 104 OF 104 MEDLINE on STN DUPLICATE 78
TI The IkappaB kinase complex (IKK) contains two kinase subunits, IKKalpha and IKKbeta, necessary for IkappaB phosphorylation and NF-kappaB activation.
SO Cell, (1997 Oct 17) Vol. 91, No. 2, pp. 243-52.
Journal code: 0413066. ISSN: 0092-8674.
AU Zandi E; Rothwarf D M; Delhase M; Hayakawa M; Karin M
AN 1998004227 MEDLINE

=>
=> d ab 16,43,46,47,49,50,53,54,56,62-64,66,67,70-73,81-83,88,95,96,98,101,102,104

L85 ANSWER 16 OF 104 MEDLINE on STN DUPLICATE 12
AB IKKgamma/NEMO is a protein that is critical for the assembly of the high molecular weight IkappaB kinase (IKK) complex. To investigate the role of IKKgamma/NEMO in the assembly of the IKK complex, we conducted a series of experiments in which the chromatographic distribution of extracts prepared from cells transiently expressing epitope-tagged IKKgamma/NEMO and the IKKs were examined. When expressed alone following transfection, IKKalpha and IKKbeta were present in low molecular weight complexes migrating between 200 and 400 kDa. However, when coexpressed with IKKgamma/NEMO, both IKKalpha and IKKbeta migrated at approximately 600 kDa which was similar to the previously described IKK complex that is activated by cytokines such as tumor necrosis factor-alpha. When either IKKalpha or IKKbeta was expressed alone with IKKgamma/NEMO, IKKbeta but not IKKalpha migrated in the higher molecular weight IKK complex. Constitutively active or inactive forms of IKKbeta were both incorporated into the high molecular weight IKK complex in the presence of IKKgamma/NEMO. The amino-terminal region of IKKgamma/NEMO, which interacts directly with IKKbeta, was required for formation of the high molecular weight IKK complex and for stimulation of IKKbeta kinase activity. These results suggest that recruitment of the IKKs into a high molecular complex by IKKgamma/NEMO is a crucial step involved in IKK function.

L85 ANSWER 43 OF 104 MEDLINE on STN DUPLICATE 34
AB To understand the mechanism of activation of the IkappaB kinase (IKK) complex in the tumor necrosis factor (TNF) receptor 1 pathway, we examined the possibility that oligomerization of the IKK complex triggered by ligand-induced trimerization of the TNF receptor 1 complex is responsible for activation of the IKKs. Gel filtration analysis of the IKK complex revealed that TNFalpha stimulation induces a large increase in the size of this complex, suggesting oligomerization. Substitution of the C-terminal region of IKKgamma, which interacts with RIP, with a truncated DR4 lacking its cytoplasmic death domain, produced a molecule that could induce IKK and NF-kappaB activation in cells in response to TRAIL.

Enforced oligomerization of the N terminus of IKKgamma or truncated IKKalpha or IKKbeta lacking their serine-cluster domains can also induce IKK and NF-kappaB activation. These data suggest that IKKgamma functions as a signaling adaptor between the upstream regulators such as RIP and the IKKs and that oligomerization of the IKK complex by upstream regulators is a critical step in activation of this complex.

L85 ANSWER 46 OF 104 MEDLINE on STN DUPLICATE 37
AB Nod1 is an Apaf-1-like molecule composed of a caspase-recruitment domain (CARD), nucleotide-binding domain, and leucine-rich repeats that associates with the CARD-containing kinase RICK and activates nuclear factor kappaB (NF-kappaB). We show that self-association of Nod1 mediates proximity of RICK and the interaction of RICK with the gamma subunit of the IkappaB kinase (IKKgamma). Similarly, the RICK-related kinase RIP associated via its intermediate region with IKKgamma. A mutant form of IKKgamma deficient in binding to IKKalpha and IKKbeta inhibited NF-kappaB activation induced by RICK or RIP. Enforced oligomerization of RICK or RIP as well as of IKKgamma, IKKalpha, or IKKbeta was sufficient for induction of NF-kappaB activation. Thus, the proximity of RICK, RIP, and IKK complexes may play an important role for NF-kappaB activation during Nod1 oligomerization or trimerization of the tumor necrosis factor alpha receptor.

L85 ANSWER 47 OF 104 MEDLINE on STN DUPLICATE 38
AB Nuclear factor kappa B (NF-kappaB) is a ubiquitous, inducible transcription factor that regulates the initiation and progression of immune and inflammatory stress responses. NF-kappaB activation depends on phosphorylation and degradation of its inhibitor protein, IkappaB, initiated by an IkappaB kinase (IKK) complex. This IKK complex includes a catalytic heterodimer composed of IkappaB kinase 1 (IKK1) and IkappaB kinase 2 (IKK2) as well as a regulatory adaptor subunit, NF-kappaB essential modulator. To better understand the role of IKKs in NF-kappaB activation, we have cloned, expressed, purified, and characterized the physiological isoform, the rhIKK1/rhIKK2 heterodimer. We compared its kinetic properties with those of the homodimers rhIKK1 and rhIKK2 and a constitutively active rhIKK2 (S177E, S181E) mutant. We demonstrate activation of these recombinantly expressed IKKs by phosphorylation during expression in a baculoviral system. The K(m) values for ATP and IkappaBalpha peptide for the rhIKK1/rhIKK2 heterodimer are 0.63 and 0.60 micrometer, respectively, which are comparable to those of the IKK2 homodimer. However, the purified rhIKK1/rhIKK2 heterodimer exhibits the highest catalytic efficiency (k(cat)/K(m)) of 47.50 h(-1) micrometer(-1) using an IkappaBalpha peptide substrate compared with any of the other IKK isoforms, including rhIKK2 (17.44 h(-1) micrometer(-1)), its mutant rhIKK2 (S177E, S181E, 1.18 h(-1) micrometer(-1)), or rhIKK1 (0.02 h(-1) micrometer(-1)). Kinetic analysis also indicates that, although both products of the kinase reaction, ADP and a phosphorylated IkappaBalpha peptide, exhibited competitive inhibitory kinetics, only ADP with the low K(i) of 0.77 micrometer may play a physiological role in regulation of the enzyme activity.

L85 ANSWER 49 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
AB Pathogens, inflammatory signals, and stress cause acute transcriptional responses in cells. The induced expression of genes in response to these signals invariably involves transcription factors of the NF-κB and AP-1/ATF families. Activation of NF-κB factors is thought to be mediated primarily via IκB kinases (IKK), whereas that of AP-1/ATF can be mediated by stress-activated protein kinases (SAPKs; also named Jun kinases or JNKs). IKKα and IKKβ are two catalytic subunits of a core IKK complex that also contains the regulatory subunit NEMO (NF-κB essential modulator)/IKKγ. The latter protein is essential for activation of the IKKs, but its mechanism of action is not known. Here we describe the mol. cloning of CIKS (connection to IKK and SAPK/JNK), a previously unknown protein that directly interacts with

NEMO/IKKγ in cells. When ectopically expressed, CIKS stimulates IKK and SAPK/JNK kinases and it transactivates an NF-κB-dependent reporter. Activation of NF-κB is prevented in the presence of kinase-deficient, interfering mutants of the IKKs. CIKS may help to connect upstream signaling events to IKK and SAPK/JNK modules. CIKS could coordinate the activation of two stress-induced signaling pathways, functions reminiscent of those noted for tumor necrosis factor receptor-associated factor adaptor proteins.

L85 ANSWER 50 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN

AB FIP3, isolated as a type 2 adenovirus E3-14.7-kDa interacting protein, is an essential component of the multimeric IκB-α kinase (IKK) complex and has been shown to interact with various components (Fas receptor-interacting protein, NF-κB-inducing kinase, IKKβ) of the NF-κB activation pathway. FIP3 has also been shown to repress basal and tumor necrosis factor (TNF) α-induced NF-κB activity as well as to induce cell death when overexpressed. The adenovirus E3-14.7-kDa protein (E3-14.7K) is an inhibitor of TNFα-induced cell death. In the current study, we generated deletion mutants to map the domains of FIP3, which are responsible for its various functions. The NF-κB inhibitory activity and the E3-14.7K binding domains were mapped at the carboxyl half of the FIP3 protein. We also found that the carboxyl-terminal half of FIP3 blocked TNFα-induced IκB-α phosphorylation and subsequent degradation, which suggests that the stabilization of the cytoplasmic inhibitor of NF-κB underlies the FIP3 inhibition of NF-κB activity. The amino-terminal 119 amino acids were responsible for the FIP3-IKKβ and FIP3-IKKα interaction, and the middle of the protein (amino acids 201-300) appeared to be both the FIP3 self-association domain as well as the FIP3-Fas receptor-interacting protein interaction domain. Thus, FIP3 might serve as a scaffold protein to organize the various components of the IκB-α kinase complex. Whereas the full-length protein is required for efficient cell death, the amino-terminal 200 amino acids are sufficient to cause rounding and detachment of the cells from the monolayer.

L85 ANSWER 53 OF 104 MEDLINE on STN DUPLICATE 41

AB NF-kappaB is regulated by inhibitor proteins (IkappaBs), which retain NF-kappaB in the cytoplasm. Signal-induced phosphorylation by the IkappaB-kinase complex containing the IkappaB-kinases 1 and 2 (IKK-1/2 or IKK-alpha/beta) and subsequent degradation of the IkappaB proteins are prerequisites for NF-kappaB activation. Many signals induce NF-kappaB, one of them being oncogenic Raf kinase. We investigated whether NF-kappaB induction is critical for Raf-mediated transformation. Here, we demonstrate that inhibition of NF-kappaB interferes with transformation by the Raf-oncogene, and we characterized the mechanism of NF-kappaB induction by activated Raf kinase and the tumor promoter phorbol 12-myristate 13-acetate (PMA). NF-kappaB activation by PMA and Raf critically depends on the IkappaB-kinase complex, most notably on IKK-2. A major signaling pathway induced by Raf is the mitogenic cytoplasmic kinase cascade. However, different inhibitors of this cascade do not affect PMA- and Raf-mediated NF-kappaB activation. Raf does not phosphorylate the IkappaB-kinase proteins directly. Raf rather synergizes with another membrane shuttle kinase MEKK1, and Raf-mediated activation of NF-kappaB is blocked by a dominant negative form of MEKK1. These results suggest that Raf induction of NF-kappaB is relayed by MEKK1, but not by the classical mitogenic cytoplasmic kinase cascade.

L85 ANSWER 54 OF 104 MEDLINE on STN DUPLICATE 42

AB The interferon (IFN)-induced double-stranded RNA-activated protein kinase PKR mediates inhibition of protein synthesis through phosphorylation of the alpha subunit of eukaryotic initiation factor 2 (eIF2alpha) and is also involved in the induction of the IFN gene through the activation of the transcription factor NF-kappaB. NF-kappaB is retained in the

cytoplasm through binding to its inhibitor IkappaBalpha. The critical step in NF-kappaB activation is the phosphorylation of IkappaBalpha by the IkappaB kinase (IKK) complex. This activity releases NF-kappaB from IkappaBalpha and allows its translocation to the nucleus. Here, we have studied the ability of PKR to activate NF-kappaB in a reporter assay and have shown for the first time that two catalytically inactive PKR mutants, PKR/KR296 and a deletion mutant (PKR/Del42) which lacks the potential eIF2alpha-binding domain, can also activate NF-kappaB. This result indicated that NF-kappaB activation by PKR does not require its kinase activity and that it is independent of the PKR-eIF2alpha relationship. Transfection of either wild-type PKR or catalytically inactive PKR in PKR(0/0) mouse embryo fibroblasts resulted in the activation of the IKK complex. By using a glutathione S-transferase pull-down assay, we showed that PKR interacts with the IKKbeta subunit of the IKK complex. This interaction apparently does not require the integrity of the IKK complex, as it was found to occur with extracts from cells deficient in the NF-kappaB essential modulator, one of the components of the IKK complex. Therefore, our results reveal a novel pathway by which PKR can modulate the NF-kappaB signaling pathway without using its kinase activity.

L85 ANSWER 56 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN

AB The phosphorylation of IκB by the multiprotein IκB kinase complex (IKC) precedes the activation of transcription factor NF-κB, a key regulator of the inflammatory response. Here we identified the mixed-lineage group kinase 3 (MLK3) as an activator of NF-κB. Expression of the wild-type form of this mitogen-activated protein kinase kinase kinase (MAPKKK) induced nuclear immigration, DNA binding, and transcriptional activity of NF-κB. MLK3 directly phosphorylated and thus activated IκB kinase alpha (IKKα) and IKKβ, revealing its function as an IκB kinase kinase (IKKK). MLK3 cooperated with the other two IKKKs, MEKK1 and NF-κB-inducing kinase, in the induction of IKK activity. MLK3 bound to components of the IKC in vivo. This protein-protein interaction was dependent on the central leucine zipper region of MLK3. A kinase-deficient version of MLK3 strongly impaired NF-κB-dependent transcription induced by T-cell costimulation but not in response to tumor necrosis factor alpha or interleukin-1. Accordingly, endogenous MLK3 was phosphorylated and activated by T-cell costimulation but not by treatment of cells with tumor necrosis factor alpha or interleukin-1. A dominant neg. version of MLK3 inhibited NF-κB- and CD28RE/AP-dependent transcription elicited by the Rho family GTPases Rac and Cdc42, thereby providing a novel link between these GTPases and the IKC.

L85 ANSWER 62 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 48

AB Besides its known role as a translational controlling factor, the double stranded RNA-dependent protein kinase (PKR) is a key transcriptional regulator exerting antiviral and antitumoural activities. We have recently described that induction of NF- Kappa B by PKR is involved in apoptosis commitment. To define how PKR mediates NF- Kappa B activation by dsRNA, we have used two different approaches, one based on expression of PKR by a vaccinia virus (VV) recombinant and the other based on induction of endogenous PKR by poly I:C (pIC) treatment. We found that NF- Kappa B complexes induced by PKR are composed primarily of p50-p65 heterodimers and also of c-rel-p50 heterodimers. As described for other stimuli, following pIC treatment, PKR phosphorylates the NF- Kappa B inhibitor I Kappa B alpha at serine 32 before degradation. Expression by VV recombinants of IKK1 or IKK2 dominant negative mutants together with PKR showed inhibition of PKR-induced NF- Kappa B activation, as measured both by gel shift and luciferase reporter assays. Immunoprecipitation analysis revealed that PKR interacts with the IKK complex. Our findings demonstrate that physiological function(s) of PKR involve activation of the I Kappa B kinase complex.

L85 ANSWER 63 OF 104 MEDLINE on STN DUPLICATE 49

AB Signal-induced nuclear expression of the eukaryotic NF-kappaB transcription factor involves the stimulatory action of select mitogen-activated protein kinase kinase kinases on the IkappaB kinases (IKKalpha and IKKbeta) which reside in a macromolecular signaling complex termed the signalsome. While genetic studies indicate that IKKbeta is the principal kinase involved in proinflammatory cytokine-induced IkappaB phosphorylation, the function of the equivalently expressed IKKalpha is less clear. Here we demonstrate that assembly of IKKalpha with IKKbeta in the heterodimeric signalsome serves two important functions: (i) in unstimulated cells, IKKalpha inhibits the constitutive IkappaB kinase activity of IKKbeta; (ii) in activated cells, IKKalpha kinase activity is required for the induction of IKKbeta. The introduction of kinase-inactive IKKalpha, activation loop mutants of IKKalpha, or IKKalpha antisense RNA into 293 or HeLa cells blocks NIK (NF-kappaB-inducing kinase)-induced phosphorylation of the IKKbeta activation loop occurring in functional signalsomes. In contrast, catalytically inactive mutants of IKKbeta do not block NIK-mediated phosphorylation of IKKalpha in these macromolecular signaling complexes. This requirement for kinase-proficient IKKalpha to activate IKKbeta in heterodimeric IKK signalsomes is also observed with other NF-kappaB inducers, including tumor necrosis factor alpha, human T-cell leukemia virus type 1 Tax, Cot, and MEKK1. Conversely, the theta isoform of protein kinase C, which also induces NF-kappaB/Rel, directly targets IKKbeta for phosphorylation and activation, possibly acting through homodimeric IKKbeta complexes. Together, our findings indicate that activation of the heterodimeric IKK complex by a variety of different inducers proceeds in a directional manner and is dependent on the kinase activity of IKKalpha to activate IKKbeta.

L85 ANSWER 64 OF 104 MEDLINE on STN DUPLICATE 50

AB Phosphorylation of IkappaB by the IkappaB kinase (IKK) complex is a critical step leading to IkappaB degradation and activation of transcription factor NF-kappaB. The IKK complex contains two catalytic subunits, IKKalpha and IKKbeta, the latter being indispensable for NF-kappaB activation by pro-inflammatory cytokines. Although IKK is activated by phosphorylation of the IKKbeta activation loop, the physiological IKK kinases that mediate responses to extracellular stimuli remain obscure. Here we describe an IKK-related kinase, named NAK (NF-kappaB-activating kinase), that can activate IKK through direct phosphorylation. NAK induces IkappaB degradation and NF-kappaB activity through IKKbeta. Endogenous NAK is activated by phorbol ester tumour promoters and growth factors, whereas catalytically inactive NAK specifically inhibits activation of NF-kappaB by protein kinase C-epsilon (PKCepsilon). Thus, NAK is an IKK kinase that may mediate IKK and NF-kappaB activation in response to growth factors that stimulate PKCepsilon activity.

L85 ANSWER 66 OF 104 MEDLINE on STN DUPLICATE 52

AB Here we report the identification of a novel PMA-inducible IkappaB kinase complex, distinct from the well-characterized high-molecular weight IkappaB kinase complex containing IKKalpha, IKKbeta, and IKKgamma. We have characterized one kinase from this complex, which we designate IKKepsilon. Although recombinant IKKepsilon directly phosphorylates only serine 36 of IKBalpha, the PMA-activated endogenous IKKepsilon complex phosphorylates both critical serine residues. Remarkably, this activity is due to the presence of a distinct kinase in this complex. A dominant-negative mutant of IKKepsilon blocks induction of NF-kappaB by both PMA and activation of the T cell receptor but has no effect on the activation of NF-KB by TNFalpha or IL-1. These observations indicate that the activation of NF-kappaB requires multiple distinct IkappaB kinase complexes, which respond to both overlapping and discrete signaling pathways.

L85 ANSWER 67 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN

AB Delhase et al. take issue with our claim that Akt induces activation of

NF- Kappa B by phosphorylating IKK alpha , contending that IKK alpha plays no role in the activation by TNF of NF- Kappa B, and consequently that Akt could not affect NF- Kappa B through IKK alpha . They point out that Hu et al. have shown that cells deficient in IKK alpha have normal TNF- Kappa B activity, but this has been refuted by Li et al., who reported significant reduction of TNF-induced NF- Kappa B in IKK alpha -deficient cells. Indeed, the observations of Hu et al. show that degradation of I Kappa B alpha is diminished in cells from IKK alpha -deficient mice and are therefore not consistent with the conclusion that IKK alpha plays no role in TNF induction of NF- Kappa B. Furthermore, deficiency of IKK beta only partially impairs TNF-induced NF- Kappa B activation, which reserves a role for IKK alpha in this pathway. Others have shown that activation of the IKK complex is dependent on the kinase activity of IKK alpha to activate IKK beta . Thus, strong evidence supports a role for IKK alpha in TNF induction of NF- Kappa B. Delhase et al. only tested the role of Akt on NF- Kappa B activation in HeLa cells in which they did not observe activation of Akt by TNF. As the involvement of inflammatory stimuli, including TNF, TRAF-6, IL-1 and LPS in PI(3)K/Akt activation is well documented, Delhase et al. should have investigated the Akt/NF- Kappa B connection in some of these systems.

L85 ANSWER 70 OF 104 MEDLINE on STN DUPLICATE 54

AB The NF-kappaB family of transcription factors plays a crucial role in the immune, inflammatory and apoptotic responses. These proteins are normally found in the cytoplasm, retained by interaction with an inhibitory molecule called IkappaB. Activation of the NF-kappaB signalling cascade results in phosphorylation and degradation of IkappaB, allowing nuclear translocation of the NF-kappaB complexes. The recent identification of a high-molecular-weight complex containing two kinases and a regulatory subunit has led to a flurry of new results that shed light on some of the most complex mechanisms contributing to the exquisite regulation of NF-kappaB activity.

L85 ANSWER 71 OF 104 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN

L85 ANSWER 72 OF 104 MEDLINE on STN DUPLICATE 55

AB NF-kappaB is a critical activator of genes involved in inflammation and immunity. Pro-inflammatory cytokines activate the IkappaB kinase (IKK) complex that phosphorylates the NF-kappaB inhibitors, triggering their conjugation with ubiquitin and subsequent degradation. Freed NF-kappaB dimers translocate to the nucleus and induce target genes, including the one for cyclo-oxygenase 2 (COX2), which catalyses the synthesis of pro-inflammatory prostaglandins, in particular PGE. At late stages of inflammatory episodes, however, COX2 directs the synthesis of anti-inflammatory cyclopentenone prostaglandins, suggesting a role for these molecules in the resolution of inflammation. Cyclopentenone prostaglandins have been suggested to exert anti-inflammatory activity through the activation of peroxisome proliferator-activated receptor-gamma. Here we demonstrate a novel mechanism of antiinflammatory activity which is based on the direct inhibition and modification of the IKKbeta subunit of IKK. As IKKbeta is responsible for the activation of NF-kappaB by pro-inflammatory stimuli, our findings explain how cyclopentenone prostaglandins function and can be used to improve the utility of COX2 inhibitors.

L85 ANSWER 73 OF 104 LIFESCI COPYRIGHT 2008 CSA on STN

AB NF- Kappa B is a heterodimeric transcription factor that plays a key role in inflammatory and immune responses. In nonstimulated cells, NF- Kappa B dimers are maintained in the cytoplasm through interaction with inhibitory proteins, the I Kappa Bs. In response to cell stimulation, mainly by proinflammatory cytokines, a multisubunit protein kinase, the I Kappa B kinase (IKK), is rapidly activated and phosphorylates two critical serines in the N-terminal regulatory domain of the I Kappa Bs. Phosphorylated I

Kappa Bs are recognized by a specific E3 ubiquitin ligase complex and undergo polyubiquitination which targets them for rapid degradation by the 26S proteasome. NF- Kappa B dimers, which are spared from degradation, translocate to the nucleus to activate gene transcription. There is strong biochemical and genetic evidence that the IKK complex, which consists of two catalytic subunits, IKK alpha and IKK beta , and a regulatory subunit, IKK gamma , is the master regulator of NF- Kappa B-mediated innate immune and inflammatory responses. In the absence of IKK gamma , which normally connects IKK to upstream activators, no IKK or NF- Kappa B activation can occur. Surprisingly, however, of the two catalytic subunits, only IKK beta is essential for NF- Kappa B activation in response to proinflammatory stimuli. The second catalytic subunit, IKK alpha , plays a critical role in developmental processes, in particular formation and differentiation of the epidermis.

L85 ANSWER 81 OF 104 MEDLINE on STN DUPLICATE 61
AB Rel/NF-kappaB transcription factors are primarily regulated by association with inhibitor IkappaB proteins. Thus, in most cells NF-kappaB exists in the cytoplasm in an inactive complex bound to IkappaB. Most agents that activate NF-kappaB do so through a common pathway based on phosphorylation-induced, proteasome-mediated degradation of IkappaB. The key regulatory step in this pathway involves activation of a high molecular weight IkappaB kinase (IKK) complex, whose catalysis is generally carried out by a heterodimeric kinase consisting of IKKalpha and IKKbeta subunits. This review describes the identification of proteins in the IKK complex, and the regulation and physiological functions of IKK.

L85 ANSWER 82 OF 104 MEDLINE on STN DUPLICATE 62
AB The activation of NF-kappaB by receptors in the tumor necrosis factor (TNF) receptor and Toll/interleukin-1 (IL-1) receptor families requires the TRAF family of adaptor proteins. Receptor oligomerization causes the recruitment of TRAFs to the receptor complex, followed by the activation of a kinase cascade that results in the phosphorylation of IkappaB. TANK is a TRAF-binding protein that can inhibit the binding of TRAFs to receptor tails and can also inhibit NF-kappaB activation by these receptors. However, TANK also displays the ability to stimulate TRAF-mediated NF-kappaB activation. In this report, we investigate the mechanism of the stimulatory activity of TANK. We find that TANK interacts with TBK1 (TANK-binding kinase 1), a novel IKK-related kinase that can activate NF-kappaB in a kinase-dependent manner. TBK1, TANK and TRAF2 can form a ternary complex, and complex formation appears to be required for TBK1 activity. Kinase-inactive TBK1 inhibits TANK-mediated NF-kappaB activation but does not block the activation mediated by TNF-alpha, IL-1 or CD40. The TBK1-TANK-TRAF2 signaling complex functions upstream of NIK and the IKK complex and represents an alternative to the receptor signaling complex for TRAF-mediated activation of NF-kappaB.

L85 ANSWER 83 OF 104 MEDLINE on STN DUPLICATE 63
AB Colorectal cancer is a major cause of cancer deaths in Western countries, but epidemiological data suggest that dietary modification might reduce these by as much as 90%. Cyclo-oxygenase 2 (COX2), an inducible isoform of prostaglandin H synthase, which mediates prostaglandin synthesis during inflammation, and which is selectively overexpressed in colon tumours, is thought to play an important role in colon carcinogenesis. Curcumin, a constituent of turmeric, possesses potent anti-inflammatory activity and prevents colon cancer in animal models. However, its mechanism of action is not fully understood. We found that in human colon epithelial cells, curcumin inhibits COX2 induction by the colon tumour promoters, tumour necrosis factor alpha or fecapentaene-12. Induction of COX2 by inflammatory cytokines or hypoxia-induced oxidative stress can be mediated by nuclear factor kappa B (NF-kappaB). Since curcumin inhibits NF-kappaB activation, we examined whether its chemopreventive activity is related to modulation of the signalling pathway which regulates the stability of the

NF-kappaB-sequestering protein, IkappaB. Recently components of this pathway, NF-kappaB-inducing kinase and IkappaB kinases, IKKalpha and beta, which phosphorylate IkappaB to release NF-kappaB, have been characterised. Curcumin prevents phosphorylation of IkappaB by inhibiting the activity of the IKKs. This property, together with a long history of consumption without adverse health effects, makes curcumin an important candidate for consideration in colon cancer prevention.

L85 ANSWER 88 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN

AB A review with 9 refs., on essential role of serine phosphorylation of IκB kinase β subunit (IKK-β) in activation of IKK complex, and neg. regulation of IKK activity by autophosphorylation of IKKβ C terminal.

L85 ANSWER 95 OF 104 MEDLINE on STN DUPLICATE 72

AB IkappaB kinases (IKKalpha and IKKbeta) are key components of the IKK complex that mediates activation of the transcription factor NF-kappaB in response to extracellular stimuli such as inflammatory cytokines, viral and bacterial infection, and UV irradiation. Although NF-kappaB-inducing kinase (NIK) interacts with and activates the IKKs, the upstream kinases for the IKKs still remain obscure. We identified mitogen-activated protein kinase kinase kinase 1 (MEKK1) as an immediate upstream kinase of the IKK complex. MEKK1 is activated by tumor necrosis factor alpha (TNF-alpha) and interleukin-1 and can potentiate the stimulatory effect of TNF-alpha on IKK and NF-kappaB activation. The dominant negative mutant of MEKK1, on the other hand, partially blocks activation of IKK by TNF-alpha. MEKK1 interacts with and stimulates the activities of both IKKalpha and IKKbeta in transfected HeLa and COS-1 cells and directly phosphorylates the IKKs in vitro. Furthermore, MEKK1 appears to act in parallel to NIK, leading to synergistic activation of the IKK complex. The formation of the MEKK1-IKK complex versus the NIK-IKK complex may provide a molecular basis for regulation of the IKK complex by various extracellular signals.

L85 ANSWER 96 OF 104 MEDLINE on STN DUPLICATE 73

AB NF-kappaB is activated by various stimuli including inflammatory cytokines and stresses. A key step in the activation of NF-kappaB is the phosphorylation of its inhibitors, IkappaBs, by an IkappaB kinase (IKK) complex. Recently, two closely related kinases, designated IKKalpha and IKKbeta, have been identified to be the components of the IKK complex that phosphorylate critical serine residues of IkappaBs for degradation. A previously identified NF-kappaB-inducing kinase (NIK), which mediates NF-kappaB activation by TNFalpha and IL-1, has been demonstrated to activate IKKalpha. Previous studies showed that mitogen-activated protein kinase/ERK kinase kinase-1 (MEKK1), which constitutes the c-Jun N-terminal kinase/stress-activated protein kinase pathway, also activates NF-kappaB by an undefined mechanism. Here, we show that overexpression of MEKK1 preferentially stimulates the kinase activity of IKKbeta, which resulted in phosphorylation of IkappaBs. Moreover, a catalytically inactive mutant of IKKbeta blocked the MEKK1-induced NF-kappaB activation. By contrast, overexpression of NIK stimulates kinase activities of both IKKalpha and IKKbeta comparably, suggesting a qualitative difference between NIK- and MEKK1-mediated NF-kappaB activation pathways. Collectively, these results indicate that NIK and MEKK1 independently activate the IKK complex and that the kinase activities of IKKalpha and IKKbeta are differentially regulated by two upstream kinases, NIK and MEKK1, which are responsive to distinct stimuli.

L85 ANSWER 98 OF 104 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 75

L85 ANSWER 101 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN

AB Activation of the transcription factor nuclear factor kappa B

(NF-κB) by inflammatory cytokines requires the successive action of NF-κB-inducing kinase (NIK) and IκB kinase-α (IKK-α). A widely expressed protein kinase was identified that is 52 % identical to IKK-α. IκB kinase-β (IKK-β) activated NF-κB when overexpressed and phosphorylated serine residues 32 and 36 of IκB-α and serines 19 and 23 of IκB-β. The activity of IKK-β was stimulated by tumor necrosis factor and interleukin-1 treatment IKK-α and IKK-β formed heterodimers that interacted with NIK. Overexpression of a catalytically inactive form of IKK-β blocked cytokine-induced NF-κB activation. Thus, an active IκB kinase complex may require three distinct protein kinases.

L85 ANSWER 102 OF 104 HCAPLUS COPYRIGHT 2008 ACS on STN
AB Activation of the transcription factor nuclear factor kappa B (NF-κB) is controlled by sequential phosphorylation, ubiquitination, and degradation of its inhibitory subunit IκB. A large multiprotein complex, the IκB kinase (IKK) signalsome, was purified from HeLa cells and found to contain a cytokine-inducible IκB kinase activity that phosphorylates IκB-α and IκB-β. Two components of the IKK signalsome, IKK-1 and IKK-2, were identified as closely related protein serine kinases containing leucine zipper and helix-loop-helix protein interaction motifs. Mutant versions of IKK-2 had pronounced effects on RelA nuclear translocation and NF-κB-dependent reporter activity, consistent with a critical role for the IKK kinases in the NF-κB signaling pathway.

L85 ANSWER 104 OF 104 MEDLINE on STN DUPLICATE 78
AB Recently we purified a 900 kDa cytokine-responsive IkappaB kinase complex (IKK) and molecularly cloned one of its subunits, IKKalpha, a serine kinase. We now describe the molecular cloning and characterization of IKKbeta, a second subunit of the IKK complex. IKKbeta is 50% identical to IKKalpha and like it contains a kinase domain, a leucine zipper, and a helix-loop-helix. Although IKKalpha and IKKbeta can undergo homotypic interaction, they also interact with each other and the functional IKK complex contains both subunits. The catalytic activities of both IKKalpha and IKKbeta make essential contributions to IkappaB phosphorylation and NF-kappaB activation. While the interactions between IKKalpha and IKKbeta may be mediated through their leucine zipper motifs, their helix-loop-helix motifs may be involved in interactions with essential regulatory subunits.

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	172.42	172.63

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-4.80	-4.80

STN INTERNATIONAL LOGOFF AT 12:23:04 ON 22 JAN 2008